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TO

THE FELLOWS OF THE

MASSACHUSETTS MEDICAL SOCIETY

THESE

"STRIVINGS FOR TRUTH TO HELP THE BRETHREN"

DONE AT THEIR CALL

ARE FRATERNALLY DEDICATED

BY

THE AUTHOR

PREFACE.

To supply a not infrequent request for a copy of one or other of the following papers is the chief motive for re-printing them.

Originally prepared to meet the requisitions of societies before which they were delivered, these essays awakened exceptional interest, — a result the more gratifying to the author in that it was wholly unexpected.

Criticism there was, it is true, and although it was generally kind and appreciative both at home and abroad, the occasional exception attested, more clearly than passive assent alone could do, that the doctrines advanced, though possibly novel, were seasonable and operatively suggestive. A general or an immediate adoption of the principles one

advocates is of less importance than their intrinsic truth; for, as Louis says, "whatever has this character cannot fail in the end to be of real utility."

In a recent Address before the Clinical Society of London, Sir William Jenner declares it "discreditable to the profession that so many common diseases . . . . have for their cure so many drugs." Yet he ignores or fails to recognize the only mode of investigation by which this discredit can be avoided. Whether this the true method is justly presented in the following pages, and whether, in view of the eminent testimony quoted, the time has not fully come for its renewed advocacy, are questions left for the indulgent reader to determine.

ROXBURY, BOSTON,
June, 1875.

CONTENTS.

I.

NATURE IN DISEASE.—*An Address before the Norfolk District of the Massachusetts Medical Society*, at the Annual Meeting, May 12, 1852. 1

II.

DISEASE,—A PART OF THE PLAN OF CREATION.—"*The Annual Discourse*" *before the Massachusetts Medical Society*, May 31, 1865. 25

III.

MY FIRST QUESTION—as a medical student —ITS SOLUTION A SURE BASIS FOR RATIONAL THERAPEUTICS.—*An Address before the Norfolk District of the Massachusetts Medical Society*, at the Annual Meeting, May 8, 1872. 61

IV.

NOTES. 93

NATURE IN DISEASE.

1852.

"Medicus curat—Natura sanat."

ADDRESS.

NOTWITHSTANDING the rapid progress of medical science in these latter days, and the great advances the present has made over past ages in freeing our profession from the mysticisms which have ever enveloped it, it is still to be feared that too many of our fraternity set out upon their professional career indelibly impressed with Mr. Bagges's notion, that "disease is a certain noxious something, to be destroyed by medicine as an acid by an alkali;" and when, like Dr. Labell, they have treated their patients to "leeches, blisters, antimony, opium, ether, ipecac., colchicum—lotions, fomentations and liniments"—they, like him, take good care to impress upon the convalescent that these medicines have cured the disease by putting a stop to it! Believing this themselves, they indoctrinate their patrons, and through them the public, with the same idea. But

it must have early struck the attentive student, as it may now-a-days even the superficial observer, that under various and conflicting methods of treatment many diseases come to about the same general results —about the same relative number of recoveries and failures. For a longer or a shorter period, the most diverse theories, as of Cullen, and Brown, of Broussais, and Rasori, and others of less note, have claimed and held pre-eminence. During its reign, each has been considered not only superlatively successful, but boasted its unrivalled cures. Under each, patients recovered in sufficient numbers to enable its followers to predict its universal adoption. That many died, though drugged in strict accordance with the prevailing and supposed infallible theories, as well as under other methods of treatment, is sufficiently evident from the fact that these systems lost the confidence they once obtained, and now remain only in the memories of our older practitioners, or serve to amuse those whose curiosity leads them to search the records of past hypotheses. No system has now such unquestioned sway, as had those of Cullen and Brown with our fathers. We are now in an unsettled state—in transition from hypothetical to more rational methods. The doctrine of "nature curing diseases," so

full of baneful influences on the practice of physic in the opinion of Cullen and his followers, has been stripped of most of its supposed dangers, by the present generation, and is again in the ascendancy. The present period is remarkably favorable for more extended and more correct observations in this regard, and it is to be hoped that it will not pass unimproved by the profession.

The science of therapeutics, though freed from many of its absurdities, has not yet made great positive advances when compared with other branches of medical knowledge. Nevertheless, the recent results of a more exact pathological anatomy, registered and counted, have not been without their salutary effect upon the treatment of diseases. Sixteen years ago, a translation of that incomparable work of Louis on Typhoid Fever was distributed to the members of the Massachusetts Medical Society. Many a doubting glance was cast over its pages, and grave and respected elders were then heard to remark to each other and to the bystanders "that it would be a disgrace to any New-England physician to treat fever as recorded in that work." The vigorous—to call it by no harsher name—the vigorous treatment, then and previously pursued in this neighborhood for typhoid fever, had *done so much*

that the expectant method, therein set forth, seemed doing nothing indeed. Venesection, emetics, cathartics, blisters and mercury, the remnants of English heroics, stood in strange contrast with the milder trifles, the barley-mixture and gum-syrup, of the French hospitals.

The previous year, Dr. Bigelow delivered his well-known discourse on self-limited diseases, before the same Society. The doctrines of that discourse fell like an exploding bomb-shell into the camp of those who had taught their patients, and probably had themselves believed, that they had *broken up* unnumbered cases of fever by a master-stroke in the commencement, or had cut short the triumphal progress of the disease by some wonderful exploit of professional strategy. Many went away sorrowful at the doctrine—some at such heresies in high places, and some fearful perhaps that if disease had not suffered at their hands, the patient certainly had. The right spirit, however, was awakened. Accurate investigations were made and recorded. Autopsies, rigorous and general, were again instituted; and the result has been that an entirely new view of the history and pathology of typhoid fever has since prevailed. And, whether the redness and ulceration of Peyer's patches stand in the relation to it of cause or effect,

or neither—a constant coincidence of these phenomena with this fever, and the increasing belief of its self-limited nature, have been sufficient to remodel the plans for treatment. This has been done so effectively that it may now be doubted whether it would not be a disgrace in any one of us to fail to recognize the principles established by Louis, in our treatment of this and similar diseases.

Valuable as these advances have been, the practical inquirer has other and equally important questions to ask of the observer. Disease has been noted, registered, and counted, under various forms of treatment. *What would its course and result be if left to itself*, under no "treatment" at all, that is to say without the administration of any drugs with a view to cut short or even to mitigate its progress? For this question must receive a distinct and definite answer, from the observation of a sufficient number of cases, before the real value of any method of treatment can be truly estimated.

It may be said, and with truth, that this is a difficult question to decide—that single cases vary greatly in character—that the constitution and state of the patient are not the same for any two individuals—that in its tendency, severity and complications, each case differs from every other. But all this

does not alter the proposition. From such cases we are constantly proclaiming the value of certain remedies, and deducing plausible theories of treatment. Aye, but the experiment—who will be bold enough to try it? The sin of omission in practice is the unpardonable of offences. To have *tried everything that could be thought of* is the impregnable retreat of the baffled practitioner, and a balmy sedative to the bereaved. Nevertheless, until the advantage of the prescription over its omission be known, the administration of a drug is as great and as hazardous an experiment as the withholding of it. Who can say with truth that it is not even more dangerous? The popular reasoning, "that it will do no harm if it does no good," although it will hardly bear the test of ordinary common sense, may be sufficiently satisfactory to ignorant and officious bystanders, who seem sometimes to literally revel in an opportunity to crowd a patient's stomach with multifarious mixtures, and to load his person with offensive masses. The suffering individual may prefer the trial at any risk, under the irksomeness of debility or the pangs of disease; but recovery, following a compliance with his wishes, is not proof positive that he has been benefited by the experiment.

A violent fever sets in—the patient is bled, and powerful drastics are administered. In a few days he is well. Has his disease been *broken up?* Might he not have recovered equally well and speedily had he never seen a prescription, or the supposed remedies? Cases of recovery in similar circumstances, without interference, are not infrequent. And until the question can be decided on a large scale—until the degree of probability in a given case can be shown from multitudes of such observations, the value of the interference, for good or for evil, must remain uncertain and problematical.

Now, hundreds of cases of typhus fever have been submitted to the most thorough expectant or let-alone treatment; and it has been found that so far as duration of the disease is concerned, the results were quite favorable. Cases commencing with most violent symptoms of inflammation, delirium, &c. &c., have subsided after a day or two, and convalescence has been fully established in less than a week. It has been found that the natural duration of the disease is from three to more than a hundred days—some of the longer cases having commenced or terminated so gradually as to render precision to a day impossible, and the shorter ones resembling, as far as they went, those which proved of longer continu-

ance and dangerous severity. By far the larger number were convalescent in less than twenty days. In severity of daily and progressive symptoms, these cases compared favorably with equal numbers of others under the various and ordinary treatment of competent practitioners. In general results, these cases presented a ratio of recoveries decidedly larger than those in which an active, or heroic, treatment was employed.

We may not be able or willing to adopt such a course for an individual in private practice; for, as has been well remarked, "such treatment may do for armies, where one man is as good as another; but does not answer for individuals, by nature prone to over-estimate their personal consideration." Still, until the principles by which the individual may securely have just that degree of treatment suited to his distress and danger are established better than they now are, the results of such investigations must have a beneficial influence. Let every opportunity of observing a case of fever undisturbed by drugs be improved by each one of us. It cannot fail to add to our knowledge of the real nature of the disease, and perhaps may save some of our patients from unnecessary suffering; for, although some of us may be wandering amongst infinitesimals,

the most of us in medicine, even now, like the rich in their wealth in Hesiod's time, "do not know how much better a half is than a whole."

The truly expectant plan has also been tried in the treatment of scarlet fever—in fewer cases, but with very similar results. This disease is admitted on all hands to be self-limited, and no one pretends to break it up. Yet there are indications from all quarters, especially from such observations as those alluded to, that even in this day of small doses, professional overdosing is a great obstacle to speedy and perfect recovery from this complaint. These cases of too much interference happen the more frequently where the great anxiety of influential friends, stimulating the too ready attendant, exacts a multitude of appliances and a legion of remedies —that there may be abundant evidence of "doing something" for the victimized patient. How much the probabilities of recovery have thus been diminished; how many, if not fatal, at least severer sequelæ have thus been entailed upon the sufferer; how many broken constitutions, what impaired vitality, and greater susceptibility to noxious influences; how many weaknesses in protean forms have thus originated; how many fatal terminations have thus been directly induced, we may never know.

We may, however, taking heed to such suggestions, be less anxious to invent new prescriptions and appliances, than to dispense with many now usual and popular, lest perchance it turn out to our mortification that the disease, in our day and generation, is really less formidable, as nature forms and developes it, than as modified and complicated by the ordinary interferences of art.

The natural history, progress and tendency of dysentery, if carefully re-investigated, would form no mean addition to our professional acquisitions. That this disease tends to recovery, and is actually recovered from, in a sufficient number of cases to inspire confidence in the treatment, under all varieties of practice, from the most heroic drastics to the most inappreciable doses; and that we often hear practitioners complaining that it is so very "obstinate" or unyielding to remedies, in this or that season, are sufficient indications that it is self-limited, and defends itself, as best it may, against excessive medical interference. That, as in typhus, scarlatina, and other exanthems, a person having experienced one attack of this disease is thereby protected against a second, though not so certainly proved, is not improbable from recent observations. The subject throughout possesses unusual interest, and is deserving of attentive revision.

In 1836, Dr. James Jackson caused to be translated and published Louis's work on "Bloodletting in some Inflammatory Diseases, and on the Influence of Tartarized Antimony and Vesication in Pneumonitis," and added thereunto his valuable collection of cases from the records of the Massachusetts General Hospital. He was induced to publish this work, he says, by the deep impression which Louis's results, so little in accordance with the general opinion, had made on his own mind. And he candidly admits, after re-examining the cases referred to, that "it would seem to be of less importance whether our patients were bled or not, than whether they entered the hospital early or late." That is, comfortable apartments and attentive nursing exercise a greater influence over this disease than the boasted powers of bloodletting, then so universally relied on. Well might he add, that such results "will no doubt surprise many, if not most, medical men." They did surprise the profession; and the treatment of pneumonia now is quite a different thing from the treatment of the same disease fifteen years ago. Whether venesection is now sufficiently employed in pneumonia, or not, is a question I cannot answer; but certain it is that the average of fatal cases treated without it, in this vi-

cinity, does not exceed, but rather falls short of, that stated by Dr. Jackson for the cases so treated in the Massachusetts General Hospital. At the time of the publication of the work alluded to, it was the practice, in this section of the country at least, to administer antimony in pneumonia to constant nausea—to tolerance, so called. This was a very happy expedient for the routine practitioner—so simple a thing was it to mingle the drug in the customary proportion of water, and so satisfactory a matter was it to nurses and friends to find sweet solace in the frequent administration of the mixture. But the poor patient—who that has once seen can ever forget the involuntary shudder, nay, the inexpressible horror, when the repulsive draught was again and again offered? Nor was the evil always confined to the administration of the supposed remedy. "Redness, soreness, and even pustules were produced in the fauces," admits Dr. Jackson. Yes, and autopsies revealed pustules throughout the intestinal canal, even where tolerance had not been exceeded. I well remember the subdued undertone in which such facts were whispered about among the profession; and the trembling hesitancy with which antimony was subsequently administered by those whose faith in it could not be shaken, though

they were ready to admit an unaccountable irritability of the mucous membrane in some idiosyncrasies. How much the patients unnecessarily suffered by this and other equally harsh medicines for this disease will probably never be accurately estimated—how many were relieved of their distress, or restored, in consequence of such practice, will remain equally a subject of conjecture. One thing is certain, that many distinguished practitioners thought and taught that they effected "remarkable cures" by such a course of treatment. And another thing is now not less certain, from the testimony of most respectable members of the profession, who have watched, expecting to prove the contrary—that pneumonia, even in the severer forms, may pass, with perhaps equal certainty, through all its stages to perfect recovery, under the administration of infinitesimal nullities.

Perhaps no disease, in this vicinity, is more dreaded by parents, and practitioners also, than membranous croup. Certainly none requires more assiduous attention, and offers less prospect of ultimate success. We now speak of the membranous disease, and not of those spasmodic or catarrhal affections generally classed with it. These latter, though often violent and alarming in the outset, are comparatively harmless, and ought no longer to be

called by the terrific name of croup, with which they have little or no affinity.

Sixteen years ago it was taught, from the lips of undoubted authority, that "croup is death." Its great fatality, its great frequency in certain localities, and the insidious nature of its attack, have made it the subject of observation by many anxious inquirers, who, of late, have added much to our knowledge of its nature and history. It has been found that the membranous affection (occupying chiefly, but not exclusively, the larynx, trachea and bronchiæ) spreads usually from above downwards, and not in an opposite direction; that if it begin in the trachea it may descend into the bronchiæ, and will not probably mount to the larynx; that with nursing children false membranes are not infrequent in the fauces only, and that the liability to descend into the larynx increases in proportion to the age of the child; that in adults, on the contrary, false membranes are, except in rare cases, chiefly confined to the smaller bronchiæ. It has been found, also, that the membrane itself is of a peculiar nature—a tissue of elastic fibres, longitudinally arranged; the fibres smooth, and in no degree transversely striated. Great elasticity is one of its chief characteristics. It is unorganized in its

nature, or so much so that it never tends to organic union with the subjacent tissues. As soon, and in proportion, as the local affection abates, the membrane begins to separate, and, by irritating adjacent parts, causes itself to be thrown off. It may be re-formed a second, or even a third time.

It is believed, from careful investigation, that death, when resulting from local causes, is not oftener due to the obstruction by the membrane than to the weakened or paralyzed action of the muscles which open the glottis—though spasm seems to be most dreaded by attendants generally. And further, observation has shown that cases of undoubted recovery, with expulsion of the membrane, have taken place under treatment by calomel to excessive salivation, emetics to cruel barbarity, caustics to distressing peril, more frequently under the milder process of anodynes and watery vapor, sometimes under inappreciable doses, and, lastly, without any medical treatment, real or pretended—so that it must be set down among the self-limited diseases, with a natural tendency, though feeble it may be, towards recovery.

These few diseases have been adduced from among many others that might be cited, to illustrate the position assumed, and to indicate the kind of

observations we would urge. Such observations any one of us may make. They are easier, and will be more serviceable to ourselves and the profession, than attempts to solve the mysteries of disease by pathological dissections. These, though more generally insisted on, and certainly never to be neglected, often require most skilful hands and most patient examinations on the part of the practised, and such a number of cases as only large cities can supply; but the other is forced upon us at the bedside of every patient. No one can over-estimate the importance of correct knowledge on this subject. Without it, we shall ever be uncertain as to the *real* value of any therapeutic interference. The fear of not doing enough may deter us; but we have seen how much the best physicians have formerly erred in their implicit reliance on powerful medicines to shorten disease and to restore health. And we know that the natural tendency to recover under simple nursing, or under inappreciable doses, is at least as great as under the formidable heroics of former times. "When I came upon the stage," wrote a few days ago a venerated friend, who last year entered on his second half-century of active practice—"when I came upon the stage, whatever might be the differences of opinion about the nature

or origin of the disease, there was none at all about the treatment: the first day an emetic, the second a cathartic—just as regular as the first and second bells for church-going on Sundays. Over and over again, during my pupilage, I have heard the patient say to my teacher, 'O doctor, I know I ought to have sent to you before, but I did *so dread* to take an emetic!' And this dread of seeing the doctor for fear of an emetic was founded on woful experience—the one was as sure as the other. And such doses—Lord save us! Nothing short of the indomitable spirit and power of that strong race could have carried the Pilgrim Fathers through their trials, or their descendants through their struggles with such Herculean medical practice."

Thus saith my friend—and at the present day may it not be that we are standing in a similar position towards those who may come fifty years after us; and this the more likely, as it is an occasional remark of Continental visitors, abundantly qualified to make correct observations, and after sufficient experience and intercourse in the country, "that our people are martyrs to drugs and medicines—and this, too, at the hands of the profession."

If we ourselves are not able or willing to make the trial where we feel that experience has given a power

to alleviate pain or to arrest disease, many of us, if so disposed, may turn to account the cases of any of our fraternity who honestly deal in infinitesimals. It were better for us, and for the science to which we are devoted, to avail ourselves of such opportunities than to waste our time and temper in empty cavillings against their vaunted, but, as we believe, baseless theory. If we need not the instruction, it is time the public were instructed by us in more correct notions of the nature of disease. So long as physicians teach their patients, directly or indirectly, or allow themselves to suppose, that diseases cannot be removed unless broken up by some masterly exploit, or amazing mystery of art, so long will the profession stand in a false position —so long will it be subject, as in times past, to violent alternations from formidable heroics to mystified trifling—so long will practitioners be doomed to have some of their sickest patients taken from them and placed at the critical moment in the hands of reckless adventurers, perchance to recover under treatment wholly inappropriate or totally inefficacious—so long, also, will medicine be ranked among the uncertain sciences, and its results be classed by intelligent laymen as the offspring of blind chance. With more frequent reference to the natural history

of disease, physicians will adopt a less assuming and presumptuous bearing, which, while it serves to make the vulgar stare, brings grief into the hearts of the discriminating. The most celebrated of our profession, ever remarkable for their little reliance on the specific powers of medicine, and always noted for administering the smallest quantities and the mildest forms, have ever been distinguished for modest demeanor and a willingness to admit that they have been merely careful attendants and watchful assistants, *nature guiding*, at the bed-side of the sick. Thus we hear an illustrious exponent of medical lore, after skilfully carrying a patient through a protracted and almost hopeless disease, modestly remarking that he had "visited the lady, and the Lord had cured her." And we are none the less forced to admire the renowned skill of that glorious veteran of military surgery, after a successful attendance on a chieftain horribly mangled in battle,

> "Who wrote from Suza's blood-stained field,
> 'I dressed the wound that God has healed.'"

Here, too, in our own day and circle—those of us who were privileged to listen to the teachings of

> "The truest, noblest, wisest, kindest, best,"

of physicians and men, will bear witness to the

fall to the lot of other mortals, they will add the necessity of augmenting professional acquisitions by an enlarged knowledge of collateral sciences. To watch carefully, to study thoroughly, to guide cautiously, will become only the more imperative. Individual labors may thus be increased; but as such investigations are successfully pursued, and the knowledge of the real nature of diseases is better known and promulgated, the relations between physician and patient will rest on a more rational basis; the profession will reach a higher elevation and take a firmer hold on the confidence of the people, than it has ever yet attained; and its members will be saved from the reproach now sometimes cast upon them, that they have been "ever learning, but never able to come to the knowledge of the truth."

DISEASE

A PART OF THE PLAN OF

CREATION.

1865.

"A mighty maze! but not without a Plan."

DISCOURSE.

THE profession we follow is capable alike of the divinest endeavor and the meanest purpose. To save it from degradation, and to elevate it to its true position as one of the noblest of human vocations, its faithful votaries have labored with untiring energy in past times and in our own, down to the present hour.

To understand disease, and to "cure" it, are the great objects and the laudable aspirations of the Medical Profession. The former is difficult; the latter often impossible. Notwithstanding the advanced state of medical science, numbers are at all times prostrate by sickness, and most of the race die prematurely. So uncertain are the effects of diseases, and so disastrous often their termination, that even the simplest attack may become a source of personal anxiety and alarm. Such, too, are the

sympathies of our nature, and so constantly are they thus called into action, that experienced attendants upon the sick frequently grasp blindly and fortuitously at a multitude of heterogeneous appliances which have obtained the name of remedies, in the hope that some one of the number may perchance rescue or relieve the sufferer. In this way physicians themselves, even the more eminent, are imperceptibly and almost inevitably brought to the practical belief that in the officious administration of drugs sanctioned by custom or by prevailing prejudice,—the superintending "a course of treatment," as it is called,—lies the chief end and aim of their calling. So thoroughly at last does this idea permeate the very life and thought of the daily routine of our profession, that the mere suggestion of a more comprehensive and a more scientific view, or a more rational motive, if suspected of any accompanying distrust of popular or fashionable professional measures, is liable to be frowned upon as heresy. And thus it happens, that in every generation the struggle must be renewed to re-establish principles, and to arrest the mechanical, downward, trade-like tendency of our art; and good men and true are called upon, and must be willing, to go to the front and bear the brunt of the battle.

Grand forward movements in behalf of medical truth have been made in various directions in our own time, and with various success; but it is well known to the members of this Society that the great victory of the present century was achieved in this place just thirty years ago. Carefully and irresistibly the first advances were then made, and the first positions gained, until at length the whole argument was driven home, and the stronghold impregnably secured. From henceforth, wherever the English language is spoken or read, the doctrine of self-limitation will be a ruling influence in the profession until a new era shall require a further advance, or science shall demand another expression.

Thrown out as a "picket" on this occasion, I will attempt the service assigned to me and return as speedily as possible to the main column, fortunate if the solitary shot bring down a single resisting error; more fortunate if it serve to open on any point a clearer view for the progress of the advancing hosts.

"Who did sin, this man, or his parents?" is a question daily asked, in one form or another, at the bedside of the sick. The frequent response, as well as the query, presupposes, in general, that disease is

undoubtedly referable to some indiscretion on the part of the sufferer, to the errors of his progenitors, or, at least, to that

> "first disobedience, and the fruit
> Of that forbidden tree, whose mortal taste
> Brought death into the world and all our woe."

To show the fallacy involved in this question, and that the original answer was the true one,—to show that disease is not a mere accident in the history of our race, or due only to unwarrantable experiments upon our powers of endurance, but, rather, that DISEASE IS A PART OF THE PLAN OF CREATION,—one of the myriad expressions of Divine thought,—will form a leading object of the present discourse.

Modern geology has brought to light many wonders of the past. It has revealed to us unmistakable evidences of the existence on the earth of numerous classes of organized beings, long ages before the appearance of the human race. Animals then lived, flourished, and passed away. Individuals, then as now, had a limited existence, which death terminated. Whole tribes, then as now, were so constituted that they could live only by the destruction of others. For this purpose they were provided with organs for seizing, tearing, and de-

vouring their prey; while in some instances they seem to have been armed not only to destroy, but to torture their victims. On the other hand, organs of defence were furnished to those in danger of assault, and means of escape given to the weak. So that it is evident that the same strife prevailed in those early periods of the world's history as in the present times. In short, there were voracious mammalia before man, voracious reptiles before mammalia, and voracious fishes before reptiles. Moreover, much curious information has been acquired with regard to the structure and functions of the internal organs of these extinct animals. Not only has the nature of their food been ascertained by the half-digested remains of other animals found within some of these creatures, but the size and structure of the digestive organs themselves, their vascular surface, and the mucous membrane which lined them, have also been made evident by unequivocal marks on the surfaces of their contents. From these and other appearances found in such fossil remains, the inference is unavoidable, that these creatures must have been liable to functional disorders of the abdominal organs similar to those affecting animals of analogous structure at the present day.

While such indications of the nature and habits of these remote animals, and their consequent liability to derangement of function, are thus plainly manifested, the proofs of their liability to organic or structural diseases are complete and unassailable. Extensive enlargements by ossific inflammation have been discovered; as also cavities and outgrowths produced by abscesses. Specimens of caries and necrosis are not infrequent. Other marks of scrofuloid diseases are also recorded. Instances of anchylosis have been noticed; and re-union of fractured bones, with exostosis at the points of junction, have been described and figured. And, more than this, evidences have been found of recovery from the most extensive lacerations, involving bony structures, by the fangs of other animals, where the individual must have lived long enough afterward to allow the injuries to be repaired, as far as is ever possible after great loss of substance.

All these things we have most clearly demonstrated to us in addition to the lethific action of physical causes, burning, freezing, suffocation, storms, natural poisons and the like, which also have existed through all time.

Thus it is evident that, from the beginning (using here the word in the widest geological meaning,

and not simply in the narrow sense of the beginning of human existence), life has been subject to dangers, disorders and diseases, such as beset it in these latter days; and that it has ever had essentially the same means of escape and modes of recovery. So that we are led to the inevitable conclusion, that, if the existence and peculiar structure of these ancient animals afford proofs of design, generally acknowledged to be most wonderful and convincing, so also their diseases, in the same way made known to us, and their processes of recovery from disease and accident, no art having intervened, must be accepted as equally the result of intelligent contrivance.

In like manner animals now living, whether species continued from former ages, or introduced in more recent periods, all are liable to disease and bodily infirmities. Though they prey upon each other, the numbers thus destroyed probably bear but a limited proportion to those swept away by occasional pestilence. Singly and silently, however, the many, when overtaken by disease, withdraw to some obscure and sheltered nook to await their fate,—of recovery or death. If health returns, they crawl out by degrees to the warmth of day; and many an awkward sportsman has rejoiced over

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captures due less to his own skill than to the weakness of the convalescing victim. Usually such cases are isolated; and each individual passes away like a falling leaf, unnoticed and unmissed. Occasionally an epidemic rages, and the destruction becomes excessive; while, at times, "diseases of mysterious origin break out in the animal kingdom, and well nigh exterminate the tribes on which they fall."

As it is with wild, so it is with domestic animals. Diseases seize upon them in obedience to laws of which as yet little or nothing is known. Ordinarily they succumb, one by one, unnoticed except by their owners, the scavenger, and the drayman. Now and then, however, the fold is infected, and its future hope endangered. Then the alarm spreads, and the whole country is aroused. In its ignorance and terror it sacrifices life without mercy, and treasure without discretion.

It were well for communities in general to give such subjects more careful study; and especially so for physicians, since "there is every reason," says an eminent authority, "for believing that pathology in man would be greatly benefited by investigations of the diseases of animals."

And so it appears that disease is not only a part

of the constant experience of animals, which cannot have any agency in the matter, and only submit to the conditions imposed upon them, but that it obtained in the earliest originations of organized existence, and has continued uninterruptedly to the present time. No "mortal taste," but the will of the Creator, determined and fashioned such a system of diseases,—the evidences of which, foreshadowed in the beginning, become more and more apparent in the subsequent phases of Creation.

Turning now to the human family, whatever may have been its original condition, we find the "lapsed race," from the first pair, brought under the same general scheme. In no period of his life is man exempt from the incursions of disease, from infancy which wakes into an exanthem, to old age which sleeps "sans everything." Every organ has its peculiar diseases, every system of the body its own affections. No forecast or wisdom of the individual can with absolute certainty ward off or delay these attacks. To such an extent is this recognized, that the young adult who has passed through the diseases of childhood, so called, is considered by statists of greater merchantable or insurable value, than one who has still to incur such dangers. Theories have been abundant to show how single

condition, is as completely under the influence of the disease as at any subsequent period of its progress. As this stage closes, that of fever sets in, perhaps with some considerable degree of severity. Then, in three or four days, a rash appears, beginning on the face and neck. On the fifth day, it covers the body and extends to the extremities. On the sixth it begins to decline on the parts first affected, whilst it is vivid on the general surface. On the seventh, eighth and ninth, the rash fades, receding in the order in which it came on, and leaving the cuticle in a state of desquamation.

Such is the history of one of the most common exanthems. Others of the class are not unlike it in their general onset, course and termination. The strongest evidence derived from any piece of mechanism cannot indicate a plan more distinctly than that furnished by any of these diseases. In their invasion, incubation, progress, culmination, decline and disappearance, they are as systematically pre-arranged, and as wonderfully wrought out, as is the life-history of any existence, vegetable or animal, in its conception, embryonic state, infancy, puberty, and adult, middle and declining age. There cannot be adduced a greater proof of inventive thought, or varied contrivance, perfect in

itself, in all its parts and as a whole, than is here exhibited.

What is thus true with regard to exanthems, is also true of other diseases to a greater extent than might at first be imagined. It may hereafter be shown that a state of incubation belongs to all diseases. One can hardly doubt it in acute cases; or even in chronic. How seldom is health found to have been perfect up to the very moment of apparent invasion in typhus, and typhoid and inflammatory affections! How often rather is it observable that some unappreciated discomfort, or perhaps some exaltation of spirits, is admitted, when a thorough investigation is attempted! It is often found that the more obstinate and ordinarily fatal diseases include multifarious weakening disorders, endured by the victim some time before their true nature is fully realized. Be this as it may, after a disease has once taken up its occupancy it follows certain laws peculiar to itself, as the lengthened histories of the books amply testify. These, though written for an entirely different purpose, reveal, if we read aright, a remarkable conformity to the idea which we have tried to develope.

May not what we have shown of the simplest morbid affections be also true of the more compli-

cated and less understood diseases, such as those of the blood, for instance, or of the nervous system, which the acutest observers have failed to explain? We hear often of metastasis. An internal organ gives evidence of a severe attack. All at once the local symptoms abate, and a distant part, an extremity perhaps, becomes the seat of exquisite tenderness and intolerable pain. Hardly do these subside before terrific agony affects the head, and the patient sinks in the frightful struggles of mania. Theory explains that, in the internal organ first attacked, pus or similar morbid matter was evolved; that this, taken up by the adjacent veins, was carried to the extremity by the veins of that part; and that, when the last change occurred, it was effected in a similar way in the direction of the head,—post-mortem existence of pus in the several parts being considered proof positive of the truth of the hypothesis. Or else, that the pus taken up by the veins and carried to the heart, is forced through the arteries by that organ to the other parts subsequently affected. But how, in the first instance, can veins whose currents run in the same direction or towards a common centre, carry fluids or other matter in opposite directions? Or, on the second supposition, can we imagine that pus can go unaltered through

the whole circuit of the circulation without poisoning the whole system rather than a remote part? Besides, the primitive formation of pus is left wholly unaccounted for. Is it not more rational to presume that the original morbific cause, after incubation sufficient to pervade the system, revealed itself, first, in the internal organ, next in the extremity, and lastly, in the head; the outward demonstrations being only consecutive manifestations of the one unexplained disturbing cause?

Acute rheumatism may also furnish an illustration. This disease, with one central, constitutional morbific cause, shows itself on the outposts in most astonishing ways,—now at the end of an extremity, and in a moment, as it were, leaving that to appear in a distant part, perhaps on the other side of the body. When it is fixed upon any portion, one cannot with any certainty hasten or retard its departure, say how long it will remain, or predict what will be its next point of attack. Each new case is a new enigma. How curiously planned, how varied in uniformity, how singularly wrought out! Finite intelligence could never have originated such a combination; human intellect never approached it in subtilty of contrivance.

But instances need not be multiplied. There is

hardly a disease which, if studied in this view, will not afford an example of wondrous designing power. All the resources of art would be unavailing in an attempt to originate even one of the simplest specific diseases. Great is the mystery that overhangs the nature of morbific causes. The highest intellects have proved incompetent for its solution. Volumes have been written to elucidate it, still the mystery remains as obscure as in the days of the earliest observers. But the inference is unavoidable, that, if the human mind cannot unfold the marvels of a disease with all the attendant and antecedent phenomena, and much less find the morbific cause, it must have required a higher intellect than any created, to have combined these agents, and arranged the laws by which they all are governed.

Not less worthy of notice are the different susceptibilities of different individuals to any single disease; and of a single individual to different diseases. When the seeds of disease are scattered abroad, many fall into unprepared systems and, after springing up, quickly wither away; not every acorn becomes an oak. Let a large number of persons be simultaneously exposed to contagion: one portion of them would soon sink under its

influence; another would be severely affected; still another, and perhaps the largest, would suffer moderately; while some would pass unscathed, entirely unaffected by its presence. In a great number this susceptibility would be exhausted by one attack, so that the subjects of it could bear any amount of subsequent exposure with impunity. On the other hand, a few would receive the disease a second, and possibly even a third time. This difference of susceptibility obtains in regard to most if not all diseases, and to the protective power in many,—how many, is not yet fully ascertained. In other cases, however, one attack only predisposes to a repetition. In this respect, also, there seems to be a graduated scale, arranged with forethought and planned by intelligence. And all this is true no less of individuals than of classes.

Again, diseases are distributed through the different seasons of the year with such a degree of constancy, that the seasons themselves are sometimes spoken of as the causes of the diseases. But a little reflection will enable one to see, that, in the nature of things, there is no essential or known reason why diseases of the bronchial mucous membrane should prevail in winter, or those of the intestinal mucous membrane in the summer; why

the plague should require warmth, or variola cold, to spread abroad its devastations.

In like manner the appearance and peculiar characteristics of common diseases in ordinary seasons, or the severer cases of epidemics in all seasons, may never be satisfactorily accounted for by the external surroundings of the victims. After most careful investigations, writers are still compelled to admit that there must be some unknown condition, some cause not understood, other than the poverty, privations, filth, and locality of those attacked. The simple explanation is to be found in the idea of an original Plan, as we are attempting to demonstrate. With this as the guiding idea, how much more intelligible become such investigations of disease; how much easier the unravelling of the laws which govern organized existence; how much time saved, now lost in fruitless search for specific causes!

Other evidences of Design and fixed law may be noticed in the general averages of sickness and mortality. These are such and so constant, that insurers can calculate with accuracy their probable losses from one decade to another, though their patrons are selected from the most vigorous and favored classes; and any community can estimate,

if it chooses, its loss of time by sickness, so as to provide beforehand for the coming emergencies of future years.

The geographical distribution of the various animals and plants within certain limits, a discovery which has given additional interest to natural science in our day, is not more remarkable than the geographical distribution of diseases. While some seem to be almost cosmopolitan in their extent, others are confined to restricted localities, beyond which, without any apparent reason, they seem unwilling to go. As some plants thrive best in connection with others, or in near proximity, so there are diseases which seem to have a mutual affinity, or appear generally in connection with each other; while, on the other hand, some unexplained antagonisms and complements exist among diseases, not unlike those observed in the vegetable kingdom.

Furthermore, that power peculiar to organized beings, which enables them to endure, within wide limits, all kinds of physical changes and exhausting influences, is no less remarkable in the tolerance of diseases. This "reserved force" seems a necessity preliminary to the possibility of disease, or at least to recovery from it. Without this reserved force, ordinary functions would be in constant danger of

interruption or absolute destruction. With it, the severest malady may pass through all its stages to perfect recovery, without, in the end, greatly injuring the individual. This will appear a more remarkable provision when we consider, that during disease the ordinary supply of nourishment for the development of force is refused by the patient, and often only so much is accepted as may be barely sufficient to continue existence. We are wrong in calling this, or any phase of it, a *vis medicatrix*,—a term (the sooner discarded the better) involving theories long since abandoned, and now almost forgotten. It is simply a vital principle of endurance, sustaining the organism through all the period of disease, as necessary at the outset as at the close.

Such are some of the evidences of forethought and design in the introduction of diseases. These evidences are to be seen in the fossil remains of animals which lived and suffered long before man appeared upon the earth. They are to be seen in the diseases of animals now existing,—in the wild which avoid, and in the domestic which cling to, the abodes of the human race. They are to be seen more universally and more completely developed in man himself, as, from the cradle to the grave, he passes through one experience to another by allotted

stages. They are to be seen in the histories of separate diseases so systematically and mysteriously constructed; and in their geographical distribution, periodicity, and modes of onset and decline. Additional evidences are also to be found in the different susceptibilities of individuals, and in the power of endurance possessed by all. From whatever point the subject is viewed, multiplied evidences arise of intelligent and inventive authorship. On all sides *these evidences are of the same kind as are adduced to show Design in other operations of nature;* and if admitted anywhere, we must admit its manifest revelation in the devising and the orderly contrivance of diseases.

Thus it appears that the idea of Diseases must have originated in the Creator's mind, and that its development formed a part of the Plan of Creation from the beginning. The ultimate purpose of such a Plan it is not for man to determine. Deliberately devised, diseases do not necessarily imply "gratuitous malevolence;" for, despite of some philosophers, it is quite possible to conceive of the earth, and all that is therein, simply as an expression of Divine thought, without reference to the question of good and evil. But to discuss this question is foreign to our present purpose; *whatever is*, is

enough for us as scientific men now to consider, humbly acknowledging that "in the Divine government the matter of fact always determines the question of right, and that whatever has been done by Him, who rendereth no account to man of his matters, He had in all ages, and in all places, an unchallengeable right to do."

Such being the facts, though it may never be explained why organized existences always have been, and until a new order of things has arisen always will be, subject to diseases, yet the extrication of what cannot be explained from what may be is no small addition to any science. Recognizing such limitations, we shall not, like the great men whom Hippocrates so ingeniously refuted (for there were great physicians before his time), labor to refer all the afflictions of the race "to hot, or cold, or wet, or dry;" nor to "figments called inflammations," which have been so quick to disappear under the tests of our own day; nor to any of the many other theories which between those have had their short-lived career. But we shall consider the causes of diseases to be primitive purposes; and, proceeding as we do with electricity, gravitation, or kindred subjects, we shall study these causes, their development, and the phenomena to

which they give rise, with more satisfaction to ourselves and benefit to the sick, and with the positive enlargement of our science.

Since these things are so, it will perhaps be said that we may as well fold our hands, and resign ourselves with indifference to whatever fate may befall us. By no means. The storm may arise and the winds may blow, but we may seek shelter from the former, or wrap our mantles closer to exclude the latter. Even against the inconveniences of a summer shower we may oppose the delicate contrivances of modern invention. But it does follow that we may not attempt to attack the laws of nature with any hope of arresting the fury of the elements, or the influence of their disturbances. We may indeed estimate their forces, calculate their movements, and, having possessed ourselves of all that is known of them, govern our conduct so as in many cases to avoid them in the outset, or at least to mitigate the evils in their train, or to take advantage of whatever of good can be derived from their presence.

So with regard to diseases, we may not have it in our power to banish their elements from existence; we may not often prevent their coming, or be able to stay their progress; we may not jugulate or

break them up at pleasure when once they have seized upon us, or greatly shorten their continuance; we may not amend their destructive characters, or very sensibly diminish average mortality;—nevertheless, suitably recognizing their place in the great Plan of Creation, and acquiring as full a knowledge as possible of their phenomena, with a just estimate of human power, we may seek, with some certainty of success, to evade their approach, or to save ourselves from many of the inconveniences and dangers of their attacks. Thus, when a disease "has obtained foothold in the system," we may remove as far as possible obstacles to the natural progress of its "succession of processes," and sustain the system as well as may be in its power of endurance, until these processes are duly and safely completed. To do this to perfection is no easy matter. It will require a greater knowledge of disease than any individual, however learned, has yet acquired; a more thorough investigation of each separate case than is now made by the most pains-taking practitioner; a more complete mastery and discriminating use of all the appliances of our art than has been heretofore possessed and practised; and a more absolute and abiding control of the patient and his surroundings

than was ever yet granted to any medical attendant. Possibly the Profession and the Public may hereafter be educated up to such a state of perfection in the management of the sick; though, as yet, even the profession seems not quite willing to fully accept all that is now known of the nature and laws of disease.

"The physician," says the learned translator of Hippocrates, "who cannot inform his patient what would be the probable issue of his complaint, if allowed to follow its natural course, is not qualified to prescribe any rational plan for its cure." But how small a proportion of the profession could consistently practise their calling for a single day, were this test strictly exacted! Who among us ever saw a disease allowed to follow its natural course to its termination, unless, bolder than his neighbors, he risked the denunciation of his peers and dared by himself to try the experiment? Yet the trial is not so dangerous as was formerly believed; and, if entered upon as unhesitatingly and with the same confident expectation with which newly vaunted remedies are often given, more "wonderful cures" would be witnessed than were ever related in the books. The time is coming, perhaps it is nearer than we are aware of,

when the public shall no longer consider the proper care of the sick (their true *cure*) to consist in a mysterious and indispensable administration of drugs, but in rationally and understandingly attending to all their necessities; when the young aspirant for patronage shall not find it necessary, in order to satisfy the bystanders, to write his recipe before he has examined his patient, or to authoritatively announce the name of the disease before he has had time to comprehend the symptoms;—and there is no reason why the profession should not now, by lofty endeavor and combined action, strive with success to bring about such a desirable result. When this is accomplished, the not unreasonable requirement above quoted may be fully accepted. At any rate, it is time that the education of pupils in the study of disease should be founded on a new basis. Not a school in Christendom ever yet afforded proper opportunities, if any at all, for studying the natural course of diseases. Under different teachers, if we may credit eminent authorities and our own observations, the same disease may assume different outward appearances, according as the several "courses of treatment" may differ from each other. Although the immediate effects of drugs, and their

strictly therapeutic influence, if any, are very different matters, and ought never to be confounded, —students are too often led to believe that all the recoveries they have seen have been due to the prescriptions selected; and they go out into the world under the apprehension, that, if they do not generally "cure" disease, it will be from not having the good fortune to hit upon the right course of medication. The exhibition of a multifarious mixture, in order perchance to include the right ingredient, is not merely a fitting, but the most obvious, corollary to their previous instruction. To most men, years of anxious and much unsatisfactory experience; to some, a whole life of disappointment ending in utter scepticism of the value of medicine, are the results of such erroneous beginnings.

The doctrine we have advanced and advocated leads to a different procedure. It leads to an abandonment of the old notions of the primary causes of diseases. It leads to a new view of the purpose of diseases themselves. It shows the idea untenable, that disease, an evil, is to be expelled from the system by some antagonistic power only, the *vis medicatrix*, for example; or by a new and incompatible disease artificially induced; or that it

is in itself an effort *(conamen)* to expel from the body an enemy already in possession;—but that it is one of the attendants of life, instituted in the Beginning. And, ignoring none of the real acquisitions of the past, this doctrine divests the truth of many of the errors which have thus far impeded its progress.

This doctrine being accepted, the proper acquisition of our art will demand of students, in the first place, a thorough knowledge of the body in its healthy condition,—its organic structure, its outward form, and its internal functions; and, secondly, the investigation of the natural phenomena of disease *undisturbed by medication*, as a necessary preliminary to its proper management. It will require of them a careful study also of the operations of the mind as affecting the body, and the mutual reactions upon each other, in health as well as in disease,—health and disease being parts of one great Plan, and often intricately involved in each other. In these directions medical education has been deficient, and subsequent attention in after-life remiss. Let coming students take warning from the deficiencies and failings of those who have preceded them. Let them, thus properly grounded, and not till then, proceed to study all

the effects of accepted remedial agents. Every move from such a base will be a true progress for themselves and their science, — no disappointment or scepticism ensuing. Every advance in this way will be in the right direction, — no step to be retraced.

Of late years it has been quite common to vaunt the power which man may have over plants and animals in modifying their form, color, growth, and other qualities, and to adduce this as an argument in favor of a similar power over diseases. But the two cases are far from being analogous. It is one thing to raise a few deformed sheep, or to increase the number of vertebræ of birds from generation to generation, by "selective breeding," so called; and quite another thing to modify the course and termination of disease in a particular individual. They are separate matters, connected by no logical sequence. The one is necessarily limited to the life of an individual; the other may, nay, must extend through successive generations, or successive ages. Besides, the permanency of species has not yet been disproved, and it will be time enough to use such arguments when dogs shall be actually bred from wolves, or an ape be unquestionably transformed into a human being.

While admiring the activity in our medical schools, the facilities for instruction and for clinical observations at our hospitals, the zeal of societies, the energy of individuals, and all the various helps to professional advancement, now so multiplied and abundant, one cannot but regret the still prevalent tendency to recur so readily to second causes, and to impede the advancement of medical science by claiming for it more than is consistent with actual truth. The medical press, so often boasted of as the great disseminator of medical knowledge, is still too often the vehicle of false philosophy and unworthy assumptions. False facts, false reasoning, and non-sequitur conclusions fill up a large portion of periodical publications. Even the more stately volume seems incomplete without its remarkable cases selected for an object, and its infallible formulæ, which perhaps have never had a trial. An author who shall candidly relate his own experience, in ordinary cases, of expectations disappointed and unsuccessful issues following the employment of reputed infallible agents (and such experience only) will richly deserve, if he does not receive, the thanks of the profession, and be indeed "more than armies to the common weal."

Fashions in medication are fluctuating and fleeting. Each age flatters itself that it has made a great advance over the previous one, and has reached at last something established and permanent. But we smile at the notions of our predecessors, only to be laughed at by those who shall come after us. Time was (men are living who remember it) when pneumonia was considered a fatal complaint, unless subdued by venesection at its onset; now it is instanced, by an eminent observer, as the purest example of a self-limited disease. Time was (physicians are with us who thus practised) when spasmodic croup, so called, was believed to be an imminently dangerous disease if the external jugular vein were not immediately opened; now it is known to be a comparatively harmless accompaniment of another disorder, and needing in itself no special interference. Time was (our own day embraces it) when it was publicly taught that mercury given to salivation was not only the specific, or antidote, for iritis, but absolutely essential to its successful treatment; now, one of our number has been justly called a public benefactor for showing that such practice is not only unnecessary, but often grievously detrimental in that affection. But why

multiply examples? So it has been, and so it will ever continue to be, until more correct views are acquired of the Plan of Creation, and of human powers under it. The great facts of our science are permanent, and, however feebly stated from time to time, or hesitatingly received, will at last prevail and triumph. False assumptions are dangerous expedients, and the most ignorant will ever be the most likely to practise upon them. Truth is weakened by any addition of error; and the profession that allows it must in the end abandon its own self-respect. The remedy is in our own hands; let us be heroic enough to apply it in season.

"Medicine," says our American Hippocrates, "is the art of understanding diseases, and of curing or relieving them when possible." To this sage remark it may be added, that a Doctor of medicine should also teach the patient and his friends to acquiesce in an intelligent submission to the laws of disease; laws as manifest and inflexible as those of health. This done, the Profession will acquire a dignity before unknown to it; and the Attendant will become an enlightened guide, instead of an uncertain and bewildering dealer out of nostrums.

To turn increasing attention in the direction indicated, we ventured on the perilous duty of to-day. Let us hope, that, as impediments are one by one removed, progress may be easier in time to come. There is nothing in time past to discourage renewed effort. Though yet far off, the goal is nevertheless in sight. The present time is propitious. Allied sciences are on the move. It is for us to hasten on, and to display our standard in the foremost ranks. Thus shall we better satisfy the demands of the age, and truly ennoble our Profession.

MY FIRST QUESTION.

1872.

MY FIRST QUESTION.

1872.

"I prefer to be called a fool for asking a question rather than to remain in ignorance."

ADDRESS.

TWENTY years ago, on the unexpected failure of the appointed speaker, at the solicitation of the officers of this Society, I prepared the paper which was read at the Annual Meeting. That service was performed in early acknowledgment of the duty incumbent on each member to contribute his allotted share for the advancement of the Society and our common profession. In continued recognition of the same duty I return to note a few of the changes in the interval, and to indicate, in one direction at least, the difficult task we must leave unfinished to our successors.

The Address of 1852 urged the necessity of solving *The First Question* I asked my teacher when, for the first time, I was taken as a medical student into the presence of a sick man;—*what will be the course and result of the disease if left*

to itself, without medicine? This question my teacher, than whom never existed a more observant or conscientious practitioner, honestly and frankly confessed that he could not answer; such a case had never to his knowledge been left to itself. The reply rather surprised the young beginner; for then as now, it seemed a most befitting question to ask, and one that should be answered before any rational administration of drugs could be determined on. Elsewhere an answer was sought for, but in vain. The books did not give the desired information. All the cases they furnished had been submitted to remedial agents of real or supposed efficacy. The question appeared never to have been thought of; or, if thought of, not to have been deemed worthy of solution, or even of consideration. Nevertheless it seemed not an unreasonable question; and the resolution was tacitly formed to seek opportunities to solve it for myself, so far as practicable. Some of the results of observations made for that purpose were cited in the paper read to this Society. It had been proved, even at that time, to my own satisfaction at least, that some of the gravest or most painful diseases, left without drugs but otherwise properly cared for, will go on quite as favorably, and with

as many recoveries, as when submitted to customary medication; and much better than when violently, or, as the word then was, *heroically* treated.

Although the Address did not contain any suggestion inconsistent with the firmest faith in the efficacy and usefulness of medicines when properly tested, or in the incalculable good to the sick to be derived from the attendance and care of the educated and scientific physician, yet human diseases had been treated so invariably with drugs, and every recovery had been so universally attributed, by the public and the profession, to the efficacy of the particular drug administered, that no sooner was the statement promulgated that unaided Nature was adequate to the "cure" of diseases in a large proportion of cases, than there arose the cry of "heresy." But this cry was also raised, about that time, in regard to some of the foremost men in the profession, who apparently were not very much deterred thereby from proclaiming their convictions to their associates.

New suggestions are seldom received at once without hesitation. Often, at first, they meet with much opposition, though destined, soon after, it may be, to be fully accepted. Thus, five years

later, in 1857, when Sir John Forbes ("*Nature and Art in the Cure of Disease*") urged with great earnestness a zealous study of the Natural History of Diseases, averring that "on the profounder, more critical, and purer study of *Nature* as manifested *in Disease* rest the best hopes of improvement in the Medical Art," he was constrained to admit that "the finding of a proper field for such observation and study is by no means so easy a task as might, at first sight, appear," and to declare it to be a lamentable defect that there was "no distinct chair for instruction in the Natural History of Disease" in any of the medical schools. Laboring hard to establish these positions, and feeling, he said, that they were at variance with those of most medical men, the best informed as well as ordinary practitioners, he showed that all along the ages there were numbers of cases so absurdly or so inertly treated that they must have recovered through Nature alone, though the credit of the recovery had uniformly been given to Art. And, on such inadequate cases as these, he was content, as it were in a spirit of compromise, to rest an elaborate plea for a mode of treatment of disease that might "occupy the happy medium between doing too little and doing

too much,"—between, on the one hand, the fashion of mystified trifling then coming into vogue, and, on the other, the not less objectionable perturbative measures so often resorted to. On such unstable foundations, and without ascertaining for himself in a single instance what Nature of itself could do, he proposed a method of treatment which, after the manner of the times, he maintained in its result "must be accepted as superior to that which unassisted Nature can supply."

But for going only thus far he was violently assailed at home and abroad. The suggestion of a Chair of Natural History of Diseases, seemed particularly obnoxious. An American reviewer, who himself the year before had laid it down, in italics, as a rule, that "*no active medicine should be used in any case, unless the evidence is clear that it will effect good*," thus strongly expresses his dissent:—"We do not believe that it is right for a physician to forego, in any case, the use of positive medication where it is clearly applicable, merely for the sake of seeing how the disease will proceed under the guidance of Nature alone"—overlooking his fatal proviso "clearly applicable," and evidently forgetting that he had then so recently declared that "there are comparatively

few active medicines of real value;" and that "we need what Sydenham termed a Natural History of Diseases."

While Sir John Forbes throughout his volume thus endeavored to show the necessity of a knowledge of diseases without the interference or influence of medicines, and filled whole pages with the enumeration of the causes of the almost absolute ignorance on this subject, he seemed to give up, as almost hopeless, any expectation of a general effort to remove this ignorance, or to acquire the desired knowledge, in what he justly considered the only sure method; and his American reviewer, apparently shuddering at the announcement of the idea of letting disease go on without medication of some sort, could not bring himself to allow the right even to make use of the only truly scientific test, although, while preparing the review, he wrote to the author of the Address of 1852 — "I have just been re-reading your Address. I am glad to find your views so consonant with mine, and I hope that the subject will continue to be pressed upon the attention of the profession by different writers, each in his own way, so that the good work of getting rid of overdosing may go on."

Seldom can there be found better examples than these showing how difficult it is, even for those in authority and most self-relying, to rise above popular tenets, and to overcome the ever-pressing and probably unrecognized influence of what Forbes himself calls the "prejudices of education."

He who trumpets into notice a new agent, be it as lethiferous as chloroform or as inert as cundurango, may reasonably hope to be at once called "one of the lights of the age;" and he who impulsively lauds the virtues of any dangerous method or doubtful expedient may be quite sure of being proclaimed its "apostle;" but he who pleads for a little more caution, asks for a little more proof, points out danger, or exposes inefficiency, is liable to be looked upon with suspicion, or to be held in disfavor.

The suggestion advanced in 1852 had not proved to be an exception to the general rule. Though many journals and notices of the Address applauded its sentiments, not a few good and true men appeared to be troubled lest the confidence of practitioners in remedies should be disturbed—so that when the author was called upon, in 1865, to give "The Annual Discourse" before our State Society, an Ex-President of this District Society, an esteemed

friend, in the kindness of his heart, urged that its doctrines should accord with the prevalent opinions of the profession. This kindly-intended advice was received in the same spirit in which it was proffered, but it aroused a train of thought which ultimately expanded into the discourse itself.

To the leading object of the Discourse *my first question* naturally followed as a corollary, and received additional force from the demonstration that preceded it. If diseases are a part of the plan of creation, then there must be a plan or law in each one of them, which should be sought out and understood before any attempt can rationally be made to influence its progress or results.

Seven years only have passed since the publication of the Discourse, and yet in this short time such changes have taken place in the opinions and writings of medical men, through many influences, that one would hardly presume to read the paper for the first time now, lest it might appear to some to be merely a compilation of common-places pirated from the very journals which in the first instance decried it. A series of quotations might easily be gathered up in illustration; but one, from the *Dublin Quarterly*, 1869, will suffice for an example;—"The law regarding them [epidemics]

would seem to be as wide-spread as gravitation itself, and, no doubt of it, the Deity has, for His own purposes, ordained that it should be so; and I believe it will not end till time itself is no more."

An incident in point must be pardoned — one especially gratifying to the author — the recent unanticipated conversion of a life-long friend, who had formerly, very kindly and dispassionately, but rather adversely, criticized the leading doctrines of the Discourse. He has lately recorded his present opinion as follows: — "The doctrine that 'Disease is a part of the plan of Creation,' though at times assailed, has never been invalidated, and, better than any other statement, comprehends and explains the facts appertaining to human ailments."

The great and rapid changes alluded to in medical opinions must astonish our elder members, who, on finding where the advance has taken them, look back to their point of departure. They remember some of the first movements which opened the campaign; but they little thought then that they should live to see such a revolution — for what young men are now taught for true doctrine was considered scepticism less than forty years ago — the heresy of one generation becoming, as

is often the case, the established faith of the next. "When, in 1835, the doctrine of self-limitation was announced," says the author of a Prize Essay on Rational Therapeutics, "it was quite common among men to speak of his Discourse [Dr. Bigelow's] as showing that he was unduly sceptical in relation to the powers of medicine. But at the present time, 1857, these views are those of the profession generally." Since then, too, there might perhaps be found admirers of Sir John Forbes's doctrine among those who once wished that he had been forced to retire from the profession years previously, so that such fallacies as his could never have been promulgated; and the author of the Discourse of 1865 now unexpectedly discovers his orthodoxy confirmed by one of last year's orators of the British Medical Association, in a passing allusion to "the *modern heresy* which *forbids* us to seek for design in morbid processes!"

Nevertheless, at this late day, in regard to the "succession of processes" which constitutes a disease, the dispersion of the series, its jugulation, eradication, and, in failure of these, its subjugation, by "active" interference, are questions seemingly still open with too many practitioners, and to be

incontestably decided *only after the solution* of *my first question.* Although the books and reports of cases are continually asserting, or leaving readers to infer, that such things have been done, or could be done if medical men were only called in season, still results when carefully brought to the test do not show sufficient grounds for such inference. It is noticeable that in the bulletins of the late illness of the Prince of Wales such an intimation does not appear; the medical attendants having apparently concerned themselves with what occurred from day to day, without anticipations or predictions. And it is further noticeable that the royal person suffered the same changes as the poorest subject is liable to, which would not have been, had skill or appliances been adequate to anything better. Even to such miserable sequelæ as are almost invariably attributed to neglect of some kind, did the case finally proceed. These, which will sometimes happen to the best cared-for, where alleged causes seem entirely inadequate or wholly wanting, raise in this instance a crowd of suggestions which should lead every practitioner to juster views of the limitations of his art.

The proclaimed, and perhaps prevailing ideas

of the treatment of acute rheumatism are quite to the point. The most opposite modes of active medication, general and local, have, from time to time, been announced and advocated, for shortening the disease; or more especially, of late, for preventing serious "complications," of which "cardiac affections" seem to be most feared. But rheumatism is self-limited, and cardiac affections are a part of the disease; and, as such, may be the first in the series, or may even exist without any other portion of the body being involved. Cases of the kind have been repeatedly reported by myself to this Society — one in which the disease was diagnosticated from cardiac symptoms one or two days before any appearance in other parts; and one, where the disease was chiefly, if not wholly, confined to the heart, with only the slightest subsequent appearance, if any at all, in the extremities. Both cases recovered, without "treatment;" in the second instance, the heart symptoms entirely disappearing a few years later as the patient grew to womanhood. What portions of the body rheumatism will first or successively attack cannot be predicted; nor can any one, with the least certainty by any known means, prevent its seizure of any given part,

restrain its progress, or abridge its continuance. Yet up to the present day no other disease has so many "sure cures," or so thoroughly exposes the "fretting and vacillating" course of attendants who, blown about by every wind of doctrine, rush wildly from one vaunted set of agents to that next newly proclaimed,—no matter how conflicting with each other,—more sceptical even, as shown by their practice, than the most doubting observer. It is indeed fully time that the work recently begun at Guy's Hospital should be carried on to a complete acquisition of the undisturbed natural history of this disease.

If *my first question* had been thought of, and an attempt made, whenever practicable, to answer it for Asiatic cholera, on and since its appearance nearly half a century ago, the profession possibly by this time might have established some rational course to pursue, instead of being left to flounder about, as much at a loss as ever, in all sorts of treatment; and we might have been saved the mortification of witnessing a recantation, at the last hour, from one of the most eminent and influential teachers, now recommending a course quite opposite to that which he has taught with "silver-tongued eloquence" for forty years past.

If the plan now advocated by him is right, then countless patients have suffered at the hands of his numerous disciples up to this time. He virtually admits that he has hitherto been wrong; but seems not quite sure that the course now pursued is the true one — "its recommendation must, after all," he says, "lie in its comparative success." He does not tell us with what to compare it; an erroneous method of treatment, which had been discarded, would manifestly be an imperfect standard. The test we have suggested would be scouted perhaps by teacher and pupils; yet think you that his patients would have suffered more, or run greater hazards, in its trial than under a wrong management, or one now admitted to be such? "I will not pretend to say," says the teacher of the cases he himself treated, "that these persons might not have done quite as well if they had been left entirely to themselves." This, certainly, is the only answer that can yet be given; and as, in this formidable disease, we still do not find any settled principles of treatment, a thorough knowledge of its Natural History would be as great a gain to future victims as to the profession.

How humiliating, also, the last public an-

nouncement, if true, of the latest American collection of therapeutic formulæ, — said to contain all the most recent remedies of the most distinguished living American and European physicians and surgeons,—that "these are in marked contrast with the obsolete and hackneyed formulæ to be found in the formularies now in the market." If such a wonderful contrast has been wrought so recently in the prescriptions of the eminent living practitioners, to what can it be attributed; for previous prescriptions were but yesterday considered of equal value and efficacy, though now termed obsolete and hackneyed? What evidence have we that the newly vaunted are better than the recently discarded formulæ? To what standard or test can such a question be brought in hope of a satisfactory solution? Is it unreasonable to require something real by which to fix that standard, when it can also be said of the last grand "System of Medicine" (Reynolds's) that "it contains none of the absurdities of works of twenty years ago," although it was then thought that the works and cyclopædias of that time were so nearly perfect that, while possibly something might be added, there would never be need of much alteration or amendment?

All such pitiable oscillating from one extreme to another, with a current gratulation of superior success in each, till a prominent teacher is led to declare, in his lately published Lumleian Course, that "there are few conclusions more striking than the general one of the uncertainty of the art"—all this might have been prevented had the lesser risk been run of ascertaining, for a standard of comparison, what disease would of itself do, before interfering attempts were made to modify it by perturbative agents, whose real influence for good or for evil cannot be incontestably proved without such a standard.

A great change has indeed been effected, and a great advance has been made, yet these "prejudices" occasionally crop out in the journals we have quoted, and are now and then to be seen lingering in the addresses annually given to students by eminent teachers. One of these, last autumn, declared that he held "the doctrine [of leaving cases to Nature] to be as dangerous as the more ancient doctrine which allowed men to undertake cures in rashness and ignorance"—as though any scientific observations undertaken in the cause of truth, and in the interests of humanity, could be as dangerous as the rude experiments

of "rashness and ignorance." The lecturer's lament, sorrowful as it seems to be, that there is a "school" in England inclined to such observations and entertaining the doctrine he inveighs against, is truly encouraging, and marks a great progress in breaking down conventionalisms and "prejudices." The doctrine is quite familiar in this vicinity; has ceased to shock our immediate neighbors; and has begun to be received by some at a distance. For an example of this among many, in an annual address given last year in an adjoining State, it is said "if a case is doubtful it is wiser and safer to let Nature manage it alone;" and, in regard to giving too much medicine or giving too little, "the latter is the safer of the two." In this there is no leaning to "rashness and ignorance."

It was the fashion within the memory of living men to call the spasmodic and tumultuous essays of "rashness and ignorance" by the popular phrase "heroic treatment"—but that day is past. He who withholds the *anceps remedium* is no longer to be called a sceptic, or a timid old woman. "Do not let me hear that called heroic treatment," said Dr. Wilks in a lecture at Guy's Hospital, 1866, "where much and powerful medicine is given. Such treatment is more often

dictated by ignorance and cowardice. . . . . I call that young man a hero, and his was heroic treatment to insist on a man lying in bed, eating nothing, and taking no medicine." But even this latter heroism, as a distinction through the doctrine involved in it, is also fast passing away. Physicians, who a dozen years ago would have shrunk from admitting the doctrine, now, consciously or unconsciously, advocate it, as though it never had been called in question; and the lamentations of opponents plaintively attest its spread throughout the profession, here and elsewhere. For only a little while longer, will it be thought necessary to becloud its trial by a specious appellation, as that of the "nutritive plan," or the "mint-water treatment;" as though nutrition must not always be an essential in any treatment, or mint-water could be considered an agent of power even by the most credulous.

All this is said in no spirit of "Nature Worship" so freely denounced by writers, nor in "dismal want of appreciation of the true scope of Medical Art and Science"—but in the interests of both Nature and Art. We would hail with delight any "remedy," though discovered by a never so "audacious experiment," if fully proved to be

beneficial to the sick—nor ask for the why and the wherefore, believing the reply of Molière's student, *quia est in eo*, to be the most philosophical attainable. But, awaiting this proof, we would have the true physician sometimes at least "a spectator" (until he understood, so far as possible, the natural succession of the processes he desired "to meddle with," with their inherent tendency to good or evil results), in order that—and for that solely—he might *know*, not guess, whether "a disease is best let alone or treated by rest and diet," or "whether he can shorten its duration or abridge its sufferings" by any means within reach. It is for this we would have him "a spectator;" and it seems strange that, among a class of thinking men in this so-called enlightened age, any should still be found so fettered by the "prejudices of education," as to oppose unconditionally all such observations, since, "in proportion as the judgment is most cultivated there is the less yielding to the 'must-do-something' impulse," and the more especially while the present state of therapeutics continues to be confessedly unsatisfactory, or, as a writer in the *Practitioner* of only last year has it, "undeniably one of chaotic confusion."

The solution of *my first question* does not require an abandonment of any other line of inquiry, or method of investigation into the nature of disease, or the best mode of its management. On the contrary, every suggestion, from whatever source, promising improvement in the knowledge and treatment of disease is to be most heartily welcomed; only its real value to the sick man must ultimately be tested by reference to this solution. Let every conceivable effort be zealously made to ascertain all the characteristics and medical properties of all known or discoverable substances, and to catalogue them in Dispensatories; let chemistry torture out their elements, and authoritatively designate the changes undergone in the system when they are taken into it; let physiology indicate, if it can, the exact tissue, or element, a given drug will ultimately find its way to and act upon, be it a nerve of the heart or blood corpuscle; let the action upon animals be sought out with diligence; furthermore, let the several effects of all proposed substances be carefully observed upon the human economy in health; and then, after that, in what Waring, one of the latest authorities, calls "the only sure way of ascertaining the true properties," in disease also, remembering

that, according to another high authority, "whenever we give a man a dose of medicine we really perform an experiment," so little is as yet known of its real action;—let all these several methods be followed out to the utmost in a truly scientific spirit, none of the "refinements" of the day being omitted, and none of the brilliant results already derived from such sources being for a moment forgotten—still *the one thing* will be lacking, if the Natural History of the course and events of undisturbed disease is not well known, so that it may be taken for a standard and a test.

The effect of a medicine on the system is one thing; the benefit to be derived from it, if any, may be another and quite a different thing. Sleep, for instance, is the frequent termination of a recoverable case of delirium tremens, and, as such, is anxiously watched for by sympathizing attendants; but the sleep produced by opium, as administered in that disease not many years ago, seldom removed the complaint, but sometimes apparently ended the sufferer. Delirium and wakefulness are often distressing accompaniments of typhoid fever, but the quiet and sleep produced by a hypnotic may prove more dangerous than the evils it is intended to remove. Perspiration is often considered a

good sign in the course of a disease, but is it in reality more beneficial than the fever-paroxysm that preceded it? Philosophically speaking, are the last events of a disease any more curative than the earlier ones—each in its own order passing its allotted stages? Why need we so constantly act upon the supposition that disease, whatever our theory of its causation, is necessarily something added to, or else something taken from the system, seeing that such a supposition is unwarranted, that disease may be only (as Sir William W. Gull says) "a life-process of a perverted kind," and that we as yet know so little of the actual significance of external manifestations.

"The Art of Medicine," says the Father of Medicine, "would not have been invented at first, nor would it have been the subject of investigation (for there would have been no need of it), if, when men are indisposed, the same food and other articles of regimen which they eat and drink when in good health were proper for them, and if no others were preferable to these. But now necessity made medicine to be sought out and discovered by men, since the same things when administered to the sick, which agreed with them in good health, neither did nor do agree with them." Such was

the origin of the Art of Medicine; its crowning glory will be an *exact knowledge of the best management of the* SICK MAN, what food for his nourishment, what measures for his comfort and safety,—for the *sick man is the disease*, according to the last and highest dictum of the eminent attendants on the Prince of Wales; and *the science of the sick man* includes as an essential the answer still sought for to *my first question.*

This question of mine, thus asked in the verdancy of youth, has been ever-recurring through a somewhat extended and satisfactorily successful term of professional service. Some of the attempts at its solution have, from time to time, been laid before this Society. That there is a lurking hope that they have had some beneficial influence on the manner of viewing disease and its treatment, here and elsewhere, I shall not be so disingenuous as to deny. To have pulled at the oar in the right direction is of some satisfaction, though the bark might have reached its destination, and gained the prize, without such assistance. This question, asked of myself, before prescribing, at the bedside of each patient in succession, has saved many a one from much of the perturbation inculcated in the books of past generations, and taught too

inconsiderately even now, at home and abroad, in the schools. That it has saved from disaster and death it may be presumptuous to assert; but it can be declared with confidence that it has never endangered a single life, nor added to the sufferings of a single individual. If students were generally to begin professional life in this way, their faith in real remedies would increase as they proceeded; and not, as in too many instances, end in complete distrust at last, after a "career made up of a series of failures and successes" in which they seemed to be only insignificant participants.

Moreover, the desired solution, if it could be satisfactorily obtained, would forever silence the plausible argument of adventurers and impostors, who, no matter how preposterous or nugatory their treatment may be, claim that because recoveries may have followed their treatment they themselves and their methods are worthy of confidence —for it would then appear, even to the common understanding, that such a supposition is untenable; but in the words of the "solid and accurate" Oesterlen, "so long as physicians appeal to nothing more certain in their practice . . . they must be content to let every one else, even charlatans, appeal to *their* experience; and . . . the sick

will necessarily place the same confidence in, and award the same thanks to them, as to the most able physician."

As we have in part endeavored to show, a very great advance has been made within the last quarter of a century in the study of the Natural History of Diseases; and the scepticism in regard to perturbative treatment has already borne most promising fruit. Still the coming student will find the work only partially begun, with abundant necessity remaining for earnest observation and candid investigation. Happily, however, though but begun, progress is less difficult, now that the way is opened and the direction pointed out. Incentives also are not wanting. "It is," says the *British Medical Journal*, editorial, Jan. 13, 1872, "It is in comprehending, noting, and defining this course [of disease] and its stages, and interpreting the precise degree and incidence of the inner development of the process, and measuring its effect, that the great triumph of modern medicine consists." Hence expectation is aroused; fulfilment should not be too long deferred.

"Since the publication of Sir John Forbes's book," says Dr. Johnson in his Address in Medi-

cine before the British Medical Association in August last, "and partly, no doubt, in consequence of that publication, our views as to disease and its treatment have undergone a very great change. A purely expectant treatment is now as common as then it was rare. It is now fashionable and orthodox to trust to the curative powers of Nature, and to doubt the therapeutic power of Art. The pendulum has swung from one extreme to the other." To the young men of the profession this announcement from an influential observer offers unusual assurances. The obstacles in the way of their fathers-in-medicine need no longer to greatly impede their progress. Let them avail themselves of present opportunities while they can. "Life is short, opportunity fleeting," said the great Master; pendulums do not tarry long in an extreme. While it is "fashionable and orthodox," since every one instinctively and unconsciously conforms in some degree to the tendencies of his time, let them strive unceasingly to solve for themselves and others, *my first question*,—that they may have in the solution a surer basis for their faith in their Art, and thus become better guides to the sick than their predecessors were.

As for the still often-expressed fear that indi-

vidual success would be ruined, and the profession reduced to a nullity, should such investigations become general, nothing can be more groundless. In all ages, and in all countries, the most successful, the most confided in, and ultimately the most honored, have been those, who, with no obnoxious pretensions to personal superiority, have been guided more thoroughly than others by Nature itself in their care of the sick. Of the truth of this, the late recipients of royal favor and a nation's gratitude, in old opinionated father-land, are notable examples. Personal success depends upon far other qualifications than ability to deal out nostrums and specifics. To be eminently successful, say our teachers, and their words are worthy of all acceptation, requires, in addition to adequate learning and science, — a gentleman's kindness of heart and of manner to put one spontaneously in the place of the sufferer, however humble, that he may be done for as one would wish in like circumstances to be done by,—balance of character, — steadiness of purpose, — uncomplaining patience, — self-denial, — rectitude, — sagacity, — sympathy, with firmness capable of assuming the expression of inflexible sternness,— a certain amount of personal experience and respon-

sibility conjoined with the talent for comprehending and applying its results. These, according to our teachers, are some of the requisites for personal success. Whoever has these need not fear a loss of occupation. That there are such in our Society, such in the State, such in all countries, admits no shadow of doubt; and they are they who, in the exigencies of individuals and of the State, will be sought out and chiefly depended upon.

The Medical Profession is essential to every community; henceforth no civilized people can possibly do without it. Were any or all of the drugs in popular repute proved to be useless; were it even found that there is no particular medicinal agent essential to the best treatment of disease, of which, however, there is not the slightest apprehension, the value of the profession, as such, would not be diminished, nor would it become, as one reviewer has coarsely expressed it, "just about good for nothing." It has, as we have before and frequently intimated, higher and nobler purposes. Never in the memory of the oldest was less medicine given than at the present day, and never was the profession, the truly regular and scientific portion of it, held in higher regard by the people. Said a commoner within

hearing a day or two ago, "there is a great deal of *real respect* for educated physicians everywhere. After all, they are the best and most substantial men we have. In country towns they are invaluable."

The profession which has members with the qualifications and influence we have described may well endure the insolence of scoffers, the gibes of the thoughtless, and the fears of pusillanimous friends; for no human employment confers a greater good upon the race, or is in fact more truly valued by mankind. It is deeply grounded in the necessities of human nature, and cannot be undermined; but its usefulness will be vastly increased and placed on firmest foundations, and it will be held in still higher estimation when it shall have added to its already great and varied acquisitions a full solution to *my first question*.

NOTES.

"Add plenty of Notes."

NOTES.

Preface, line 6.—These papers were noticed at length, and reviewed, in this country, in England, and on the continent. The Discourse was translated into French and published in Paris in 1866. The Addresses were reprinted in full in medical journals here and in Europe.

Page 2, *motto.* — See note to page 52, line 2.

P. 3, *line* 7. — "The Rational Doctor;" from Household Words; New York, January, 1852.

P. 5, *l.* 1. — Cullen's words are, — "in whatever manner we may explain what have been called the operations of Nature, it appears to me that the general doctrine of *Nature curing diseases* . . . . has often had a very baneful influence on the practice of physic . . . . " and again, "although the *vis medicatrix naturæ* must unavoidably be received as a fact, yet, wherever it is admitted, it throws an obscurity upon our system, and it is only where the impotence of our art is very manifest and considerable, that we ought to admit of it in practice." November, 1783. — *Preface to his last edition before his death.*

P. 9, *l.* 14. — See note to p. 52, l. 19.

P. 9, *l.* 22. — "Fièvre typhoide abortive, — 25 cas ob-observés à l'hôpital St. Martin, la durée moyenne a été de

dix à onze jours, tres-rarement de quatre à cinq, plus souvent de six à sept."—*Dict. An. Sciences et Inst. Med.*, 1872, p. 253.

P. 20, *l.* 3.—"Honestly,"—this, said in 1852, is no longer possible! "Homœopathy, which began in a delusion, is now rapidly ending as a fraud."—*British Medical Journal, Oct.* 26, 1872, p. 470. *Editorial.*

"Those who still call themselves homœopaths do so for the sake of the notoriety which is attached to the name."—*Edinburgh Med. Journal, March*, 1875, p. 827.

"It is not a little curious that the death-blow to homœopathy should be dealt by one of its reputed heads in the country. . . . publicly [in this number] renouncing the name of homœopath . . ."—*London Lancet, April* 3, 1875, p. 493. *Editorial.*

P. 20, *l.* 8.—"Intellectually it is naught; practically it is foolishness."—*London Med. Times and Gazette, March* 20, 1875, p. 312. *Editorial.*

P. 21, *l.* 11.—"*Naturâ duce*," motto of the Massachusetts Medical Society.

P. 27.—DISCOURSE.—Said an esteemed friend, as we left the hall at the annnual meeting, 1864, "So, you read next year; well, don't give us any of your heresy!" The exordium of this Discourse was written that evening.

P. 27, *l.* 2.—"Il faut toujours en revenir à cette triste vérité, que la médecine est la plus noble des professions et le plus triste des métiers."—*Gaz. Méd. de Paris*, 1851, Tom. v. p. 448.

"Medicus sum, non vero formularum medicarum præscriptor; quas ego duas, sive *artes*, sive *dotes*, sive etiam *provincias*, appellare libeat, toto cœlo a se invicem distare arbitror."—SYDENHAM, "*Diss. Epist.*," §42.

"The practice of medicine followed as a mere business is the meanest of all vocations."—*New York Medical Record*, Oct. 1, 1873, p. 486.

P. 28, *l.* 25.—"And so in medicine, it is desirable that a voice should from time to time be raised against the abuses of a reigning fashion, and a blind and mischievous routine. May it not always prove a voice crying in the desert."—SICHEL, *London Med. Times and Gazette*, April 25, 1868, p. 452.

P. 29, *l.* 2.—See a list of publications in "Expositions of Rational Medicine," by Jacob Bigelow, M.D., Boston, 1858, pp. 57–60. Several other well-known papers have been published since that date.

P. 29, *l.* 12.—In the discourse on "Self-Limited Diseases," delivered before the Massachusetts Medical Society at the Annual Meeting in May, 1835, by Jacob Bigelow, M.D., he gives the following definition:

"By a self-limited disease, I would be understood to express one which receives limits from its own nature, and not from foreign influences; one which, after it has obtained foothold in the system, cannot in the present state of our knowledge be eradicated or abridged by art,—but to which there is due a certain succession of processes, to be completed in a certain time, which time and processes may vary with the constitution and condition of the patient, and may tend to death or recovery, but are not known to be shortened or greatly changed by medical treatment."

P. 29, *l.* 14.—"Incurability of disease"—"not the incurability of patients"—terms used by Dr. Liveing, Oct. 1, 1869.—*British Medical Journal*, p. 364.

Such expressions are not better than "self-limited,"—and are not yet demanded by science.

P. 29, *l.* 16.—"Nous sommes tous des soldats de la science."—VELPEAU, *l'Union Med.*, Aug., 1866, p. 311.

"Se retirent après avoir fait feu pour avertir le poste."—BOUILLET, Art. *Vedette*.

The term "Picket" acquired a new signification in our

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late civil war, the name of the post being given, by metonymy, to the soldier assigned to it.

P. 29, *l.* 25.—"Upon his taking his place as lord of the terrestrial creations, a specific injunction was given, guarded by a penalty for its violation: 'In the day that thou eatest thereof thou shalt surely die.' But, having taken upon himself the fearful responsibility of casting off the authority of his rightful sovereign, he came to disregard all wholesome laws, whether outspoken from the cloud upon Sinai, or written upon the organism of his physical nature; hence the insane perversions in physiology and psychology, including the poisoning of the senses of taste and smell, those faithful guardians of life and health and beauty; and hence the thousand forms of disease that flesh is now heir to."—"*Health: its Friends and its Foes*," by R. D. MUSSEY, M.D., LL.D., Boston, 1862, pp. 190, 191.

"Hence the disorder and disease; hence the groaning and travailing together of the whole creation; it is all the supernatural work, the bad miracle of sin."—*Bushnell's "Nature and the Supernatural,"* New York, 1861, p. 218.

"Medicines are created by our offended God to relieve diseases which all originate in sin."—"*Scott's Commentary, Matt.—John*," p. 650, Philadelphia, 1860.

Miss Nightingale, whose influence exceeds in effect a score of such writers, takes a diametrically opposite view of these matters. She speaks of diseases as "conditions, like a dirty and a clean condition, and just as much under our control, . . . conditions in which we have placed ourselves;" and seems to think that we can originate diseases at will. She says:

"I have seen with my eyes and smelt with my nose small-pox growing up in first specimens, either in close rooms, or in over-crowded wards, where it could not by any possibility have been 'caught,' but must have begun."

"Nay, more, I have seen diseases begin, grow up, and pass into one another."—*Notes on Nursing*, p. 26, *note*.

One of the most eminent Divines and Teachers said of a Plan (Dec. 31, 1870), "what can objectors say against it? Do they suppose that the Almighty was taken by surprise on the appearance of a smallpox!"

Another eminent D.D. [Presbyterian], Sept., 1871, expressed his "regret that any should at this age of the world refer sickness and death to the fall of man."—Private letter, Sept. 27, 1871.

P. 30, *l.* 7.—"The refutation of a wide-spread error is as important as the establishment of a new truth."—*British Med. Jour.*, May 8, 1869, p. 420.

P. 30, *l.* 8.—We quote the answer, for the benefit of those who may not remember it! "Jesus answered, Neither hath this man sinned, nor his parents; but that the works of God should be made manifest in him." JOHN ix. 3.

P. 30, *l.* 19.—See Hugh Miller, "Testimony of the Rocks;" Buckland, "Reliquiæ Diluvianæ;" "Bridgewater Treatise;" Mantell; and others.

P. 30, *l.* 24.—"Fossil sharks, with weapons so murderous, that they must have been, according to Agassiz, the pirates of that period."—MILLER, "*Old Red Sandstone*," p. 245.

P. 31, *ll.* 3 to 5.—For description of the sting of the Pleuracanthus, offensive organs, and defensive armor of other animals, see Miller, "Testimony of the Rocks," pp. 99 *et seq.*

P. 31, *ll.* 15–20.—See Buckland's Bridgewater Treatise, pp. 187–201.

P. 31, *l.* 25.—Buckland, *ib.* p. 190, *note*. "The quantity of this coprolite is prodigious, when compared with the size of the animal in which it occurs; and if we were not acquainted with the powers of the digestive organs of reptiles

and fishes, and their capacity of gorging the larger animals that form their prey, the great space within these fossil skeletons of Ichthyosauri, which is occasionally filled with coprolitic matter, would appear inexplicable."

P. 32, *ll.* 6–19.—Mr. Clift's case, see Buckland, "Reliquiæ Diluvianæ," p. 74. Cuvier, "Ossemens Fossiles," Vol. iv. p. 396 and plate. See also Zies, "Beschreibung mehrerer kranker Knochen vorweltlicher Thiere," Leipzig, 1856. A summary, with additional descriptions of specimens in the Dresden collections. See, too, the American Naturalist, Vol. iii., 1869, for more recently discovered specimens.

P. 33, *l.* 9.—We are aware that the idea of a "Great Artificer" is considered a "fetishistic conception," unworthy an educated man or an enlightened age, by some philosophers, who find an easy solution of all phenomena of Creation in "Persistence of Force," spontaneously generated, acting upon matter itself uncreatable. According to this theory, all evils are incidental, to be self-eliminated at some future period. Till a nearer approach of that good time coming, our manner of dealing with the subject may be permitted, leaving the facts presented to be translated into other language, should any one think it worth while.

P. 33, *l.* 17.—According to Dr. Livingstone, "many diseases prevail among wild animals" in South Africa.—*Researches*, p. 149.

See Recherches de Pathologie Comparée, par Ch. F. Heusinger.—Cassel, 1848.

"Epidemics are known to break out and carry off myriads of insects."—Packard's Insects, 1868, pp. 81–2.

P. 33, *l.* 26.—In Pomfret, "some [foxes] were killed at mid-day, by children, near dwelling-houses, to the amount of about a dozen. What their disease was he could not determine."—Gallup, "Epidemic Diseases," &c. p. 66.

P. 34, *l.* 5.—Hugh Miller, "Old Red Sandstone," p. 222; which see also for several noted instances of epidemics.

P. 34, *l.* 10.—See "Traité d'Hygiène Agricole," par F. A. Rufener. 8vo., Fribourg, 1858.

See also a valuable work, "Die Einimpfung der Lungenseuche des Rindviehes," &c. Prof. J. M. KREUTZER, 8vo., Erlangen; 1854.

P. 34, *l.* 16.—"Spemque, gregemque simul, cunctamque ab origine gentem."—*Georgic* iii., l. 473.

P. 34, *l.* 18.—"At length she strikes a universal blow;
To death at once whole herds of cattle go."
Dryden's Georgics, iii., lines 827–8.

P. 34, l. 23.—Sir James Forbes, M.D., "Nature and Art in the Cure of Disease," p. 46.

P. 35, *l.* 24.—A curious illustration of this may be found in a letter of Peter Faneuil, dated Boston, Feb. 3d. 1738, and addressed to Capt. Buckley, then about to sail for Antiguas—directing the Captain to make certain sales, and thereupon to "purchase for me, for the use of my house, as likely a straight-limbed negro lad as possible you can, about the age of twelve to fourteen years, and, if to be done, one that *has had the smallpox*.—*Atlantic Monthly*, June, 1863, p. 698.

P. 36, *l.* 8.—Sir Henry Holland, M.D., "Medical Notes and Reflections," Chap. xxvi.; T. Thompson, "Annals of Influenza," p. 385; and others.

The recent notable discussion in the London Pathological Society on the germ theory of disease does not seem to have resulted in any more definite knowledge on this subject than was previously possessed.—*London Lancet*, April 10, 1875, p. 514.

P. 36, *l.* 13.—"We find a gradual passage from one geological formation to another evidenced by the *gradual* dying out of the pre-existing forms of animal life, and the *gradual*

introduction of newer, and generally higher, forms (although we do not yet understand the law of such progressive changes), so, when we come to the most recent, or Quaternary, periods in geological chronology, we find evidence of Man's existence on the earth before the final disappearance of those varied forms of mammalian life which have hitherto been generally looked upon as belonging to the final period of the geological cycle." Diseases may have a similar "gradual passage"—but this is not yet demonstrable.

It is often averred that we have not the Plague, which is believed by some to have "died out" long, long ago. The *Lond. Med. Times and Gaz.*, March 2, 1872, p. 258, says: "Dr. Castaldi, the Ottoman Sanitary Delegate attached to the Turkish Embassy at Teheran, has recently, by order, inquired into the nature of a disease which has broken out in Persian Kardistan. . . . . 'Such a malady,' say Dr. Castaldi, 'cannot be anything but the Eastern Plague of former times,'"

P. 36, *l.* 19.—"It is of no avail to talk of the 'capricious' movements of disease. Nature does not act by caprices. The immunity of one place is as much the consequence of a natural law as the visitation falling upon another."

P. 36, *l.* 23.—"All modern physiological science points to the truth of the doctrine that the cholera virus can no more have a spontaneous origin than any other organic product. If sanitary defects alone be a sufficient cause for its development, we should never be free from it; and in this lies the great danger of the tendency which sanitary enthusiasts evince, to insist that it is in the power of their science entirely to abolish all causes of death except old age and accidents."—*Lond. Med. Times and Gaz.*, Sept. 28, 1867, p. 354.

P. 36, *l.* 25.— . . . . an epidemic of cholera in Zanzi-

bar, supposed to have come from Masai, in the interior of Africa; "but how it got there it is much more difficult to make out. There are objections to every supposed mode of importation."—D. O'CONNOR, Surgeon of the Dryad, *Lond. Med. Times and Gaz.*, p. 12, Jan. 6, 1872.

In November, 1848, cholera broke out, nearly simultaneously, in two vessels in mid-ocean, about a thousand miles apart, one sixteen days out, and the other twenty-seven, from an unaffected port.—*British and Foreign Medico-Chirurgical Review*, No. lxxii. pp. 444–5.

In the summer there was a severe outbreak in the island of The Grand Canary. No other of the group was affected. The origin of the disease could not be traced.—*Ib.* p. 447.

In 1832, a vessel from New York to Newport, carrying a cargo of disinfectants, and being completely saturated with their odors, had her crew attacked with cholera, at sea, and lost several on the passage, or on arrival. This we have on indubitable authority.

"It is a fact that the Asiatic cholera twice spared the poor Jews, in 'The Ghetto,' who live most crowded, filthily, and with bad nourishment."—*Letter to the Author from* DR. VALERJ, *of Rome, Italy.*

Like instances abound in all authors on such subjects.

The *London Times*, Nov. 29, 1872, says of the cholera of the previous summer, it "propagated itself almost unintelligibly, and absolutely failed to propagate itself where the field was most favorable for its diffusion."

"Again, as regards the particular spots afflicted, the result was almost uniformly in direct contradiction to such expectations as might have been rationally formed."

P. 36, *l.* 26.—"The epidemic [of smallpox] which has now prevailed [in London] more than five years, has ceased as suddenly as it originated."—*Lond. Med. Times and Gaz.* April 10, 1869, p. 389.

P. 37, *l.* 4.—"But infectious diseases do occur, and patients do die, apparently in the most salubrious places."—*Lond. Med. Times and Gaz.*, April 3, 1875, p. 368.

P. 37, *l.* 15.—*Nevertheless*, by the study of storm-laws over large areas the weather for any given place can be predicted with great certainty for considerable periods; and it is not impossible that the approach of diseases may be foretold when extensive observations shall be continuously taken, like those of Dr. Draper, weekly, in *Boston Medical and Surgical Journal* for Massachusetts—from which, already, some useful as well as curious results have been obtained.

P. 37, *l.* 20.—Marshall Hall, "Theory and Practice." Article, *Measles*.

P. 39, *l.* 8.—"The poison which generates cholera" "certainly possesses in an extraordinary degree the properties, which all other morbid poisons possess in some degree, of lying latent for a length of time, in certain localities, or in the constitutions of individuals, or both," &c.—*Cyclop. Pract. Med.*, Vol. iii. p. 253.

P. 40, *l.* 11.—This case occurred while this part of the Discourse was a-writing. The explanations given are those of the eminent gentlemen in attendance. Copland says of another case of Metastasis, "The transfer was instantaneous, . . . the medium being evidently the nervous system."—*Dict. Pract. Med.*, Article, *Disease*, §173 a.

P. 44, *l.* 1.—"It is incontrovertibly established by the experience of ages, that the disease of the Plague cannot co-exist with a heat of atmosphere above 80°, nor a little below 60°."—Sir GILBERT BLANE, *Select Dissertations*, Vol. ii. p. 154.

"Not only is the disease [smallpox] most frequent in winter, but its proportionate fatality is greatest at that season."—*Lond. Med. Times and Gaz.*, May 7, 1870, p. 499.

P. 44, *l.* 10. — "Cyclopædia of Practical Medicine," Vol. iii. pp. 23 *b* and 253 *et seq.* See also notes to p. 36, *ll.* 8, 25 and 26.

P. 44, *l.* 23.—So stated to me by agents of known ability. See also Reports to the Legislature on Insurance, &c.

P. 45, *l.* 1.—Memorial of the Boston Sanitary Association, pp. 9 *et seq.*, Boston, 1861.

P. 45, *l.* 4.—First sketched in its great outlines by Humboldt, and most fully demonstrated for the class of mollusks in their distribution along our coast by our President, Dr. A. A. Gould, in 1840. See "Invertebrata of Massachusetts," p. 315. Also "Proceedings of Boston Nat. Hist. Soc.," Vol. iii. p. 483. "U. S. Exploring Expedition, Mollusca," pp. 9 *et seq.*

P. 45, *l.* 8.—"On peut donc dire avec une parfaite exactitude, des maladies, considérées au point de vue géographique, comme des végétaux, qu'elles ont leurs *habitats*, leurs stations, leurs limites, sous le triple rapport de la latitude, de l'altitude et même de la longitude géographique." —Boudin, "*Traité de Géographie et de Statistique Médicale*," Paris, 1857, Vol. ii. p. 227.

P. 45, *ll.* 12–17. — Cretinism denotes goître in the same country. In Central Europe, typhoid fever accompanies phthisis.—Boudin.

Wherever Calopogon is met with, one may expect to find Arethusa in close proximity.—Gray.

Intermittent fever and phthisis are not usually prevalent in the same locality.

The thistle is destructive to oats; erigeron, to wheat; scabious, to flax.

"Cholera as an epidemic will not penetrate a district occupied by an epidemic of fever until that subsides."—R. Lawson, M.D., Pres. Epidem. Soc., *Lond. Med. Times and Gaz.*, Dec. 2, 1871, p. 693.

In the United States, some diseases (phthisis, for example) diminish from the North to the South, while others (abdominal fevers) increase in the same direction.—Dr. A. A. Gould, *Summary of U. S. Census*, 1860, in Massachusetts Registration Report, 1861, p. 53, and 1862, p. 48.

P. 46, *l.* 10. — "'Vis medicatrix naturæ' is a favorite professional expression, a time-hallowed portion of medical phraseology. . . . Is there indeed, among other wonders of our corporeal being, a subtile force, inherent in the very organization itself, whose office it is to protect vitality, in its very arcana — to correct errors of function, and restore lesions of structure? So our accepted phraseology implies." — *Address before the Kentucky State Medical Society*, by J. B. Flint, M.D., Pres't Soc., 1859, pp. 8-9.

Dr. Spare suggests the suppression of *medicatrix*, thus *vis naturæ;* and translates it "*the tendency of nature.*" Certainly this expression is to be preferred. — *Lib. Prac. Med., Mass. Med. Soc.*, Vol. xxv., 1868, p. 114.

"There is no such thing as a *vis medicatrix naturæ* as distinct from the operation of physical laws." — *London Med. Times and Gazette*, Oct. 12, 1872, p. 417.

"With such intelligent vital agents . . . why, we may ask, do animals ever sicken and die?" — *Cooper's Surg. Dict.*, 1872. Inflammation by Dr. R. Druit.

"To trust in such an imagined force [vis medicatrix naturæ], such a helpmate for the spurious philosophers, would be ridiculous in a scientific man." — Dr. J. Matthews Duncan's Address, *Edinburgh Med. Journal*, Feb., 1874, p. 679.

P. 46, *l.* 21. — "There is unquestionably a great deal of unknown and unrelieved suffering in the world. Dr. Struthers has discovered that whales are very liable to rheumatism (rheumatic ostitis). It has been said that animals are not subject to disease until they are brought

into connection with man, but this fact contradicts the theory."—*British Med. Journal*, Dec. 21, 1872, p. 690.

P. 47, *l.* 14. — The limits of this Discourse admitted of only a restricted development of the argument from diseases in animals; that from diseases in the vegetable kingdom, exhibited in every orchard and grove, is equally impressive and convincing.

For the same reason idiopathic diseases only (those "realities" manifested in "a series of consecutive changes") have been considered. Disorders (irregular or disturbed performance of function) afford equally good illustrations of plan, in the laws which govern them, and in the subsequent restoration from their effects.

P. 47, *l.* 18. — Dr. Brown thus quaintly states a popular belief: "A brisk fever clarifies the entire man . . . it is like cleaning a chimney by setting it on fire; it is perilous, but thorough." — *Spare Hours*, p. 206.

Said El Hadgi the Fakir, quite as sensibly, "Welcome the disease, if it bring thee acquainted with a wise physician. For saith the poet, 'It is well to have fallen to the earth, if while grovelling there thou shalt discover a diamond.'"—*Chronicles of the Canongate*, Vol. ii. p. 139.

P. 47, *l.* 21. — "But suppose the brooks and rivers could reason humanly, would they not think their destiny should be to flow along quietly and clearly, and that the fishes that stir up the mud were intruders invented for their vexation? I wish only to show that from our limited points of view, we should not attempt the interpretation of nature's laws without great precaution." — Henle's *Gen. Pathology*, p. 105.—H. Spencer, *Biology*, pp. 354-5.

P. 47, *l.* 26. — "And first I own I am of opinion that our first duty is to inquire whether the thing be or not, before asking wherefore it is?" — Harvey (Syd. Soc. Ed.), p. 122.

"Comment, je l'ignore; notre tâche est de constater, d'analyser, and d'enregister les faits; l'avenir les conciliera et les rattachera à leurs conditions primordials, en eclairant leurs lois regulatrices." — *Archives Gén. de Méd.*, April, 1868, p. 484.

P. 48, *l.* 2-7.—Hugh Miller, "Testimony of the Rocks," p. 104.

P. 48, *l.* 18. — Hippocrates, Ancient Medicine, §15, Ed. Sydenham Soc.

"Argument" by Dr. Adams, *ib.* p. 158.

P. 50, *l.* 4. — "La proportion des décès est loin d'avoir diminué avec l'accroissement du nombre des médecins." — BOUDIN, Vol. ii. p. 84.

P. 50, *l.* 10. — "Dit M. Quetelet, 'L'art de guérir exerce peu d'influence sur le nombre des décès, mais il en a beaucoup pour améliorer phisiquement le peuple. Il diminué la somme des douleurs,' &c."—*Ib.* p. 86.

P. 51, *l.* 1. — Any one who may fear that his occupation will be gone, should he admit the possibility of treating disease without drugs, will find the daily routine of a Rational Physician well set forth in the following extract:

"The medical man will find ample scope for the exercise of his faculties, even in cases where special drugging may not be requisite. Close attention, acute observation, and the expenditure of not a little time, will be indispensable on his part, in order to effectually act upon modified health — laws in regard to rest, the many nice points connected with diet, the hygrometric condition, temperature, and free circulation of the air, change of air, clothing, cleanliness, &c. His attention must also be directed to exciting or aggravating causes of disease in the locality, the residence, the room, or the person of the patient. He will, moreover, have to take care that the mind of the sufferer is kept in as tranquil a condition as circumstances will admit of,"

&c.—*Rational Medicine; The Hunterian Oration for* 1860, by S. H. WARD, M.D., &c., p. 48.

"What we desire is a statement of the excess of benefit derived . . . . over that from careful treatment without drugs (which we pray for, should we have cholera ourselves) and over other systems of medication. When we say careful treatment, we mean the giving of nourishment, and the comforting the patient in those small details which can only be attended to by a kind and skilful medical attendant, who does not conceive himself bound to *try* something for the sake of appearances."—*London Medical Times and Gazette*, Nov., 1865, p. 577.

"The real function of the medical attendant is to obviate the tendency to death in whatever mode it is most likely to occur."—*Holmes's Surgery*, vol. i. p. 334.

The idea that "according to the author's theory of disease," and we may add or that of any other, except, perhaps, the Russians' (see note *p.* 52, *l.* 19), "judicious medical treatment," at the hands of an enlightened and "careful" physician, "is of no use," has been justly characterized by a writer in the *Boston Medical and Surgical Journal*, Nov. 23, 1865, p. 336, as being "*as absurd as it is untrue.*"

P. 51, *l.* 6.—"If what is really *known* of the laws of disease were told to the members of the profession, more than half of them would indignantly discredit it," said an eminent pathologist to the author a few months ago.

P. 51, *l.* 8.—Francis Adams, LL.D., Surgeon, "Life of Hippocrates," p. 18 (*Syd. Soc. Ed.*).

P. 51, *l.* 16.—"We have not yet ever ascertained so much by simple observation as to know whether certain diseases may not perhaps be cured by the course of nature, undisturbed by any interference of art. And yet this step would appear to be indispensable to the formation of any

judgment with regard to the adoption of such interference in a majority of cases." — *Oesterlen, Medical Logic* (Syd. Soc. Ed.), p. 433.

P. 52, *l.* 2. — "And what is curing a disease? It is not healing. Strictly speaking, we cannot heal the most trifling ailment. Curing is, as the term implies, taking care of the sufferer . . . . we cannot originate the least step in the healing process." — Introductory Address, at Guy's Hospital, by Dr. J. Pye Smith; *London Med. Times and Gazette*, Oct. 12, 1872, p. 417.

P. 52, *l.* 3.—"He who gives the least medicine, and that of the least offensive kind, is coming to be regarded as the best physician. It is, by the intelligent head of the family, held no impeachment of a physician's skill that he leaves no recipe, and directs measures so simple as to reflect no mystery on his craft."—*Boston Post* (*newspaper*), July, 1864.

So far as the administration of drugs is concerned,—"the difference between a good physician and a bad one is certainly very great; but the difference between a good physician and no physician at all in many cases, is very little."—*Medical Sketches*, by John Moore, M.D., London, 1786, p. 21.

P. 52, *l.* 8—Baglivi, Hippocrates *Romanus* ab Aliberto vocatus, ait: "In curatione morborum, qui moram aliquam admittunt hoc ordine progredior. Primâ die totus sum in examinando, &c. . . . Secundâ die diligentius consideratis rebus antedictis, morbi speciem tandem decerno, et exinde remedia opportuna præscribere incipio."—*Prax. Med.*, p. 110.

P. 52, *l.* 19.—Possibly there is an exception in Russia. "Dr. Hawrowitz, Physician to Prince Constantine, told me," said Dr. Roeser, Physician to the late King Otho, to the writer, "that the mortality in the hospital of the old Russians at Moskowa—who by their faith consider disease

as a punishment by God, and the application of medicines for that reason a sin—is not greater if not less, than in other hospitals. They apply only cleanliness and good nourishment."—The Author's *MS. Notes of a Visit to Athens, Greece*, 1860.

The result thus stated agrees with my own experience. In the epidemics of 1847–8, the author took care of over three hundred cases of typhus fever without administering any drugs. The cases were taken indiscriminately, including those in a dying state when first seen. The result was thirty-one deaths in three hundred and seven cases.* Some of the complications in these cases may be briefly stated. Besides the symptoms common to all—hot, dry skin; rapid pulse; dark-coated tongue; sordes on teeth; urgent thirst; pains in back and limbs; sleeplessness, &c.—two had fearful hæmorrhage from the bowels; thirty had bleeding from the nose, in several instances requiring plugging of the nostrils; ninety-five had severe diarrhœa, frequently of a dysenteric character; sixty-seven had vomiting; nine were jaundiced; one hundred and fifty had some inflammation of the lungs, and nearly all had more or less cough in course of the disease; seventy-eight had low muttering delirium as a prominent symptom; over two hundred were deaf during a part of the disease; two hundred and thirty-one were decidedly spotted; sudamina noticed in seventy; sixteen had œdema of feet and ankles; many had painful swellings of the feet during convalescence; three had ascites; three were prematurely confined; eleven had large abscesses of the glands of the neck and under the ears; two became in-

* "The proportion of deaths from typhus may seem large (427 in 2009 cases), yet so fatal is that disease, that, on comparison with the medical statistics of such other hospitals as the Board have at present the opportunity of examining, the practice at Ward's Island has been among the most successful."—*Annual Reports of Commissioners of Emigration, State of New York*," 8vo. pp. 100–101. (*Report for* 1851.)

sane, one hemiplegic. In an epidemic of scarlet fever in 1848-9, out of eighty-one cases so cared for, seventy-seven recovered. With every attention to the comfort of the sick and as thorough nursing as possible, the progress of the disease was as tolerable, its continuance as short as, and dangerous sequelæ less frequent than in other cases more "actively treated." In 1849, of forty cases of measles, thirty-nine recovered. The writer sometimes takes care of the more painful diseases, rheumatism for instance, without drugs. It requires greater patience and painstaking on the part of the practitioner, but the result is satisfactory. "I had not time," said a prominent physician the other day in the writer's hearing, "to persuade the family that the patient did not need any medicine, so I wrote a prescription and departed."

P. 52, *l.* 25.—"Nam sæpe accidit ut facies morbi variet pro vario medicandi processu, ac nonnulla symptomata non tam morbo, quam medico debentur."—SYDENHAM, *Observ. Med.*, §10.

Baglivi and others have similar expressions.

"The constant interference of art, in the form of medical treatment, with the normal processes of disease, has not only had the frequent effect of distorting them in reality, but even when it failed to do so, has created the belief that *it did so;* leading in either case to an inference equally wrong—the false picture, in the one instance, being supposed to be true; the true picture, in the other, being supposed to be false."—Sir J. FORBES, *Nature, &c.* p. 6.

P. 53, *l.* 2.—"Objections may still be made to the inferences, which I think may be rigorously deduced, from the fact that patients attacked with erysipelas of the face are very often sensibly relieved, have much less redness of face, during, or immediately after the bloodletting than before. This relief and paleness of the face do indeed take place

sometimes; but these effects are momentary, and the progress of cure is not more rapid in these cases than in others. So that the only conclusion from this fact is, that the immediate and the strictly therapeutic effects of remedies must not be confounded."—LOUIS, "*On the Effect of Bloodletting*," &c., Dr. Putnam's Translation, p. 17.

"In about a thousand cases [of Plague] . . . although the medicines produced their wonted effects upon the organism, the malady neither ceased nor changed."—*Cyclopædia of Practical Medicine*, Vol. iii. p. 552, b.

P. 53, *l.* 8.—Sir Thomas Watson, at the Clinical Society in London, 1868, said: "To me it has been a life-long wonder how vaguely, how ignorantly, how rashly drugs are often prescribed. We try this and, not succeeding, we try that; baffled again, we try something else. . . . . Our profession is continually fluctuating on a sea of doubts about questions of the gravest importance."—*London Lancet*, Jan. 16, 1868—p. 76.

P. 53, *l.* 16.—Or, possibly, some abate at last their *hyperpraxis*, and adopt in part a more rational method; and, finding that diseases pass off, to say the least, quite as readily as under the previous management, and with fewer severe or abnormal symptoms, they comfort themselves with the absurd conclusion that disease has changed its character during their short day and generation.

"The failure of the various medications advocated," said Velpeau, in reply to Le Verrier, at a recent meeting of the Academy of Sciences, "is attributable to a grievous mistake of the public, and even of professional men, who are under the impression that diseases are not susceptible of a spontaneous cure. Many affections yield without treatment, and, it must be acknowledged, sometimes in spite of all treatment. To this fact we must not be wilfully blind. An opposite opinion unfortunately prevails. . . . . After

the exhibition of a remedy the symptoms have yielded once, twice, thrice, or oftener; hence it is inferred that the cure has been the consequence of the treatment. The inference is a natural one, but almost invariably incorrect."—*Journal de Médecine et de Chirurgie Pratiques*, Nov., 1865, art. 6981—Eng. Ed.

P. 53, *l.* 26.—"The conversion of the original disease into another is occasionally salutary." . . . "It is a very common object of art to produce this kind of conversion."—*Pract. Principles of Medicine*, by J. CONOLLY—*Cyclop. Pr. Med.*, Vol. iii. p. 272.

P. 54, *l.* 1.—"Dictat Ratio (si quid ego hic judico), Morbum, quantumlibet ejus causæ humano corpori adversentur, nihil esse aliud quam Naturæ conamen, materiæ morbificæ exterminationem in ægri salutem omni spe molientis."—SYDENHAM, *Observationes Med.*, §1. Quis circulus in probando!

"Helmetius, et parum ab eo discedens Campanella crediderunt febrem non esse morbum, sed morbi remedium, . . . ut peccantem materiem humoribus confusam eliminaret."—BAGLIVI, *Prax. Med.*, p. 72.

P. 54, *l.* 12.—As one illustration of the little estimation in which even now such matters are held, it may be stated that, winter before last, of a class of more than two hundred students invited by the writer to attend a free course of lessons in Art-Anatomy by a competent teacher, with living models, less than twenty-five ever made their appearance, and only three or four continued through the course. One of these last has since had abundant reason to congratulate himself for his attention to these teachings.

"Dr. Harley spoke of sketching and short-hand writing as of the utmost use to a medical man."—Introductory Lecture at St. Thomas's Hospital, Oct. 1, 1873—*British Med. Jour.*, Oct. 4, 1873, p. 417.

P. 54, *l.* 14.—"Trust in Nature's unaided efforts seems a simple lesson to learn; yet, I apprehend, there are few of my elder hearers who will not echo the remark, that it is only as years pass by that this apparently rudimental knowledge is acquired."—*Principles of Surgical Diagnosis*, &c., by F. LeGros Clarke, F.R.C.S., p. 16, 8vo., London, 1870.

P. 54, *l.* 24.—"It may now be affirmed that the practitioners of the present day are, speaking generally, almost as uninformed in this particular [the natural course and event of diseases] as were their predecessors fifty or a hundred years back."—Sir J. FORBES, *Nature and Art*, *&c.*, p. 5.

P. 55, *l.* 15.—See "Origin of Species," by T. H. Huxley, F.R.S., 1863, pp. 94–100.

P. 56, *l.* 18.—"I remember to have been shown a manuscript copy of a New Practice of Physic, wherein the first article that catched my eye was on the scrofulous distemper, towards the end of which I perceived the word CURE in capital letters, followed by a number of recipes, which I immediately perused with the greatest eagerness, and then asked the author if he had known many instances of cures performed by those prescriptions. 'I never knew one in my life,' replied he; 'but of what service would it be to describe a disease, if after the description I did not add the cure?'"—*Med. Sketches*, by J. MOORE, M.D., Lond., p. 64.

P. 57, l. 6.—"It is very easy to feel this wonder concerning others; it is much more difficult to remember that the same wonder will certainly be felt concerning ourselves."—*The Reign of Law*, by the DUKE OF ARGYLE, London, 1867, p. 425.

P. 57, *l.* 11.—See "Medical Communications of the Massachusetts Medical Society," 1863, p. 260.

"We now know that we cannot directly control the

morbid processes in pneumonia, pleurisy or pericarditis. We know, further, that the means formerly considered essential to the cure of these diseases tested by better clinical observations were either useless or pernicious."—Dr. (now Sir) W. W. GULL's Address, *Lond. Med. Times and Gaz.* Aug. 29, 1868, p. 243.

P. 57, *l.* 24.—See "Practical Guide to the Study of the Diseases of the Eye," by Henry W. Williams, M.D., Boston, 1862, pp. 126–30.

P. 58, *l.* 8.—"Un signe infaillible qu'une science n'est pas constituée, c'est quand elle est encore une sorte de propriété commune. Mon portier n'hésitera pas à definir la maladie, à indiquer la cause, à prescrire le remède, et à prédire l'issue. Il s'en croit le droit; et il parait l'avoir, car on n'hésitera pas davantage à écouter son avis et souvent à le suivre."—"*La Médecine et les Médecins*," Paris, 1857, Vol. i. chap. i.

P. 58, *l.* 15.—See "Rational Medicine," by Jacob Bigelow, M.D., 1858, p. 29.

P. 58, *l.* 19.—"Even a moderate amount of knowledge of the general nature of diseases, and of the mode of operation and powers of the medical art, will make a man a better patient; make him more content with the treatment prescribed, be it energetic or inert; and make him repose greater confidence in his physician."—Sir J. FORBES, "*Nature and Art*," p. 14.

P. 62, *motto.*—Dr. John Homans, 1860,—to a Professor reproving the (then) young student for what he deemed a needless question.

P. 63, *l.* 3.—Entitled NATURE IN DISEASE;—the first paper in this volume, originally published in the *Boston Medical and Surgical Journal*, Oct. 13, 1852.

P. 64, *l.* 11.—"Does it not seem absurd for any one to declare that he has changed or arrested the course of a

disease, when he is utterly ignorant of what the natural course of the disease is? Yet, absurd as it appears, we are in that position. It therefore behooves us as a first necessity to know the Natural History of disease before we attempt to cure it. The best advances which we have made of late in our Art have been founded on this knowledge; and it is none the less an Art if it has taught us to do less rather than more."—Lecture by S. WILKS, M.D.; reprinted in *Boston Med. and Surg. Journal*, July 12, 1866, p. 486.

P. 65, *l.* 16.—NATURE, with a capital N, by which is meant not a "vague external secondary personification," nor a "metaphorical subcutaneous female entity," but the forces and laws of the universe (to make the statement broad enough) so far as concerned in disease, its existence in the world, its inception in individuals, its progress, culmination, decline and departure (uninfluenced by human interference); and always pre-supposing an Originator, Law-giver, or, if any one choses the term, "Great Artificer."

P. 67, *l.* 18.—See *American Journal of Medical Sciences*, October, 1859, p. 415.

P. 69, *l.* 25.—Sometimes called (after Harvey) "The Solemn Oration."

P. 70, *l.* 1.—My friend's exact words were, as we left the hall on the day of the Annual Meeting of 1864,—"So you read next year; well, don't give us any of your heresy!"

Parvis componere magna, "'I trust you will not cast doubts on the efficacy of medicine,' said a distinguished member of our profession, speaking to me of this Address."

Address in Medicine before the British Medical Association, July 27, 1869, by SIR WILLIAM JENNER, M.D., &c. —"Modern research," says he in this Address, "has

shown that a large number of acute diseases occurring in previously sound persons have a tendency to terminate in the restoration of health, even though no drug be given. This is fact — knowledge — not scepticism."

"Again, modern observation has shown that certain acute diseases, formerly supposed of indefinite duration, run a definite course; *i. e.*, end spontaneously at a certain date from their outset, and therefore that conclusions as to the efficacy of drugs to cut short these diseases — conclusions drawn before their definite duration was known — were founded on false premises, and consequently are not trustworthy. All this is surely fact — knowledge — not scepticism." — *Ibid.*

P. 70, *l.* 13. — "He who understands nature can alone hope to rule it, because he can only do so by a knowledge of its laws."—*Oesterlen*, *Med. Logic* (Syd. Soc. Ed.), p. 22.

P. 70, *l.* 17.—"The most superficial student of medicine will not be long in perceiving that the therapeutical treatment of disease has of late years undergone a great revolution." — CH. MURCHISON, M.D., *British Medical Journal*, Jan. 20, 1872, p. 62.

P. 71, *l.* 10. — The Annual Discourse before the Massachusetts Medical Society, 1870, by W. W. WELLINGTON, M.D., *Com. Mass. Med. Soc.*, 1870, p. 155.

P. 72, *l.* 3. — Worthington Hooker, M.D., in *Publications of Mass. Med. Soc.*, 1857, p. 179.

P. 72, *l.* 7. — "Our predecessors of fifty years ago seldom dared to let diseases run their natural course, and so never discovered that in many acute cases the natural processes tend to bring about recovery. Finding that they could often relieve pain, dyspnœa, &c., by their heroic measures, they failed to perceive that the relief was occasionally procured at too great a cost, and that better recoveries and more of them could be obtained through the

use of gentler methods of treatment. Till we know something of the Natural History of a disease we cannot found a sound judgment on the effects of treatment."— Dr. J. W. BLACK, Charing Cross Hospital, *British Med. Journal*, Oct. 12, 1872, p. 421.

P. 73, *l.* 3. — "In the present state of our knowledge, the medical man who makes it understood that he has specific remedies for scarlet fever, typhus, consumption, or cancer, has either deceived himself or is deceiving others." — CH. MURCHISON, *loc. cit.*

He might have added many other diseases to his list.

P. 73, *l.* 6. — "When Brand, of Stettin, and others say that they have never lost a case in which they have been enabled to employ a cold bath in time, we are reminded of a saying of Louis — 'Que l'expérience apprend tous les jours, que le grand succès en thérapeutique tiennent trop souvent à des erreurs de diagnostic.'" — *Review of Murchison on Fevers, in British Med. Journal*, Sept. 20, 1873, p. 350.

See also Velpeau's statement in last sentence of note to p. 53, l. 16.

P. 74, *l.* 10. — "Case V., G. M., aged 10 years. I saw him on the third day; and, although there were no characteristic pains, the first sound of the heart pointed to some cardiac disturbance. On the fourth day the knees and ankles became swollen and painful."—JOHN HADDEN, M.D., *Edinburgh Med. Journal*, March, 1873, p. 827.

P. 75, *l.* 3. — "And, if my memory serves me, nearly every other plan of treatment, which has been fashionable of late years, has been attended by the same happy result." . . . "I believe, in fact, with Sir William W. Gull and Dr. Sutton, that we have no remedy that is capable of curing rheumatism" . . . Dr. Gibson shows conclusively, I think, by a large array of facts, the insignificant

importance of drugs, the immense importance of hygienic measures, &c.," in this disease. — Croonian Lectures, by J. S. BRISTOWE, M.D., *British Med. Journal*, April 27, 1872, p. 441.

P. 75, *l.* 11. — "It was owing to this uncertainty as to the best mode of treatment, that the physicians at Guy's Hospital determined to study the disease uncomplicated by remedies; for it was assuredly true that no one knew the course rheumatic fever might take if left alone, or at least no one was supposed to know." — Hospital Reports, *British Med. Journal*, Jan. 2, 1869, p. 8.

P. 76, *ll.* 6–20. — "Watson's *Theory and Practice*," London, 1871, vol. ii. pp. 581 and 597.

P. 77, *l.* 21. — *Practitioner*, October, 1871, p. 230.

P. 81, *l.* 11. — "Very dignified is the stand sometimes taken by the discriminating physician, when after a careful survey of all the circumstances of a case, he comes to the conclusion that the patient will have a better chance of recovery if he for the most part be let alone, than if his case be actively treated. . . . It is truly a 'masterly inactivity' of which a frivolous and undiscriminating mind is wholly incapable. It is in strong contrast with the fretting and vacillating course which the indefinite doser is apt to pursue in such a case."—Dr. W. HOOKER, *Rational Therapeutics*, p. 195.

P. 81, *ll.* 20–2. — Herbert Spencer, "The Study of Sociology."

P. 81, *l.* 25. — *Practitioner*, May, 1871, p. 287.

P. 82, *l.* 19. — *Practitioner*, August, 1871, p. 71. *Boston Med. and Surg. Journal*, April 11, 1872, p. 242.

P. 82, *l.* 26. — Prof. Binz, of Bonn, speaking of bromide of potassium, says: — "Against the unconditional value of these researches with negative results, it may very justly be urged that other medicines, also, have no action

on the healthy body, while they have the most decided influence on diseased persons."—*Practitioner*, January, 1874, p. 12.

P. 83, *l.* 6.—"The 'refinements' of microscopy, of chemistry and of physics." . . . . "These are now the daily and necessary implements of medical science."—*Brit. Med. Jour.*, Sept. 9, 1871, p. 281. "Instruments of precision," as Chambers calls them.—*Restorative Medicine*, p. 18, 1871.

P. 83, *l.* 10. — "Without this knowledge [Natural History of Diseases] what can all medical practice be but blind empiricism ? — a hap-hazard experiment, which may perchance to turn out either to cure or to kill the patient." —Dr. F. ADAMS, Preliminary Discourse to *Life of Hippocrates*, p. 18.

P. 83, *l.* 22.—"It may be a very troublesome symptom, and yet an extremely useful, or quite essential and inevitable corollary of the fever-process ; not to be struck at by this remedy or the other,—as the quacks, or the goodies, and the followers of rule of thumb would still have us do."—*British Med. Jour.*—on illness of Prince of Wales, Jan. 13, 1872, p. 51.

P. 84, *l.* 5.— . . . "these several organic changes, the evidence of which we call symptoms, are processes . . . . essential for the restoration of . . . health." . . . . "it is to my mind very questionable whether, if it were possible by administration of a drug to arrest the essential changes which constitute any one of these stages, health would be the result."

Again, ... "processes which are in reality steps to health."—Sir W. JENNER—*Address before the London Clinical Society—Brit. Med. Jour.*, Feb. 20, 1875, p. 236.

P. 84, *l.* 7.—On being asked by a friend, in 1869, for a definition of disease, the author gave the following :

DISEASE,—an interruption of health, manifested in a *series of events* following an *influence* from a peculiar *element*.

Note explanatory:—To go "from the end back to the beginning"—a peculiar *element* (first principle or cause) seems necessary to originate disease (as much so as one in a seed to determine the plant, its kind, &c., though as undiscoverable as in the latter case). It must be a *peculiar* element, else, by the same terms, it might be the originator of a healthy function. It may be around, on, or within the system (as especially in epidemics), and effect nothing until, in some unknown way, it sets a-going the *influence*, which is *followed by* an interruption of health. The interruption becomes known, or is manifested, through a *series of events*. This series is often called the disease, and taken for it; but it is not,—being only the evidences of it.

This definition does not necessarily involve any theory of "addition to" or "subtraction from" the organism.

P. 84, *l.* 12.—Again, "diseases are but perverted life processes, and have for their natural history not only a beginning, but equally a period of culmination and decline."—*Medicine in Modern Times*, London, 1869, p. 187. Dr. (now Sir) WILLIAM W. GULL.

"How different seems to us at the present day the value of the symptoms which were formerly considered indicative of strength."—*Ib.* p. 168.

P. 84, *l.* 13.—True enough in strict science; too true in the ordinary routine of the profession. "From a Report of the Hampstead Fever Hospital, it appears that at various times such large proportions of cases sent into the Hospital as 40 or 50 per cent.—indeed in one month 54 per cent.—were those of patients not really suffering from the diseases stated in the medical certificates under which they were admitted, and for which the Hospital was erected."

"Dr. Murchison, in his Report of the Fever Hospital at Islington, bears witness to the same facts."—*London Medical Times and Gazette*, Aug. 13, 1870, p. 176.

P. 87, *l.* 11.—"It is evident that much knowledge [of what interference is needed] cannot be obtained except by a thorough study of the Natural History of Disease uninfluenced by drugs."—*Phil. Med. Times*, Jan. 1, 1871, p. 319.

P. 89, *l.* 1.—"The most successful practitioners are those who take the simplest views of diseases and their remedies; practising according to the dictates of a good common sense, taking that term in its highest meaning. . . . . He does not consider himself the mere doser of the body; . . . . . He feels bound to take charge of everything that can in any way affect the case, and is satisfied with nothing short of absolute control of the sick room."—W. HOOKER, *Rational Therapeutics*, p. 190–1.

"To do this fully will often tax all our energies, and require often more consideration than is requisite for prescribing any supposed appropriate drug treatment."—Drs. GULL and SUTTON.—*Braithwaite*, July, 1869, p. 28.

P. 89, *l.* 2.—"Nor would medicine as a practical science fail in public estimation, or the physician be less highly esteemed, were the public instructed in the matter rationally." —Sir W. JENNER. *Address cit.*—*Brit. Med. Jour.*, Feb. 20, 1875, p. 256.

P. 90, *l.* 2.—This last clause is from Sir Henry Holland's "*Recollections of Past Life.*" The other "requirements" are from various sources not needing special acknowledgement.

P. 94, *Motto.*—"Add plenty of notes," said an eminent professional friend, on reading the manuscript of the Discourse in 1865. His advice was then heeded;—and the notes are now re-printed, with a few others, recognizable by their dates, to show the more recent changes of opinion and of practice in the profession.

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